

**DECLARATION OF
TIMOTHY P. FLANIGAN
(EXHIBIT 4)**

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9 **UNITED STATES DISTRICT COURT**
10 **FOR THE NORTHERN DISTRICT OF NEW YORK**

11 YITZCHOK LEOVITS, *et al.*,

12 Plaintiffs,

13 v.

14 ANDREW M. CUOMO, individually and
15 in his official capacity as Governor of the
16 State of New York, *et al.*,

16 Defendants.

No. 1:20-cv-01284-GLS-DJS

Hon. Gary L. Sharpe

17
18 **EXPERT DECLARATION OF**
19 **TIMOTHY P. FLANIGAN, M.D.**
20

21 Professor of Medicine and
22 Public Health Service, Policy, and Practice
23 Warren Alpert Medical School
24 Brown University

25 Division of Infectious Diseases
26 The Miriam Hospital
27 Brown Medicine
28

1 I, Timothy P. Flanigan, MD, declare as follows:

2 **SUMMARY OF OPINIONS**

3 1. Leading public health organizations, such as the Centers for Disease
4 Control (CDC) and the American Academy of Pediatrics (AAP), endorse the goal of
5 all or most students returning to school for in-person instruction for the 2020–21
6 school year. This recommendation is based primarily on these organizations’ research
7 and expert judgment that generally applicable and school-specific mitigation strategies
8 to prevent the spread of COVID-19 can be effectively applied in the K-12 education
9 setting. These organizations have also determined, again based on their expertise and
10 research, that the harmful effects of long-term school closure on students’ educational
11 progress, mental health, behavioral and social development, and physical wellbeing
12 outweigh the mitigated risk of transmission in schools that implement appropriate
13 safety guidelines.

14 2. To support the ability of schools to safely reopen for in-person
15 instruction, the CDC, the AAP, and other organizations have developed guidelines
16 that will allow schools to reopen for in-person instruction while mitigating the spread
17 of COVID-19 between students and from students to school personnel. These
18 guidelines rely primarily on the three most effective behavioral tools in combatting
19 COVID-19: social distancing, facial coverings, and hand hygiene. In addition, these
20 organizations have recommended school-specific measures, such as cohorting and
21 staggered scheduling, that will further mitigate the transmission of COVID-19.

22 3. Like the CDC and the AAP, as of at least August 26, 2020, the New York
23 Department of Health issued a document entitled “Interim Guidance for In-person
24 Instruction at Pre-K to Grade 12 Schools During the COVID-19 Public Health
25 Emergency.” This guidance, too, “prioritize[d] efforts to return all students to in-
26 person instruction at this time.” The New York state guidance told “Responsible
27 Parties” for particular schools or groups of schools that they must prepare and submit
28 plans for reopening and operating. Those plans primarily rely on the guidance’s

1 various uses of social distancing, face coverings, hand hygiene to mitigate COVID-19
2 spread, which generally tracks the way those behavioral tools are discussed in the
3 CDC and AAP guidance.

4 4. Based on my decades of experience as a physician, educator, and
5 researcher in the field of infectious disease—and in particular, based on my recent
6 experience treating, researching, and authoring articles and reopening guidelines
7 related to COVID-19—it is my opinion that schools that are able to abide by CDC and
8 comparable guidance for school reopening do not present a meaningful risk of
9 spreading COVID-19. A generalized, community-based criteria for school reopening
10 that is indifferent to the health practices and capabilities of individual schools, such as
11 the Executive Order challenged in this case, is overly broad and contrary to the best
12 available public health research and guidance. Rather, the determination whether any
13 particular school or school system should be permitted to reopen should be focused on
14 the individual school or school system's ability to implement generally accepted
15 guidelines for mitigating the transmission of SARS-CoV-2, such as social distancing,
16 face coverings, and hand hygiene.

17 5. Imposing different and inconsistent standards among and between
18 similarly situated settings will decrease compliance and undermine trust in public
19 health agencies. In particular, while the State of New York has mandated the closure
20 all in-person schooling in “red” and “orange” zones, it nevertheless permits “child
21 care activities” to continue operation in both, “non-essential” gatherings of 10 people
22 or less to continue in orange zones, and “higher education research” to continue in any
23 red or orange zone—along with many other diverse activities discussed in New
24 York's “Guidance for Determining Whether a Business Enterprise is Subject to a
25 Workforce Reduction Under Executive Order 202.68, Related to New York's Cluster
26 Action Initiative to Address COVID-19 Hotspots.” These policies are based on a
27 manifestly correct conclusion that childcare and higher education research are
28 essential services. But a virus does not behave differently simply because children are

1 together in a room for daycare or students gather for research rather than class. The
2 safety measures the State deems sufficient for these comparable settings can and
3 should be applied to in-person education.

4 **BACKGROUND & QUALIFICATIONS**

5 6. I am a practicing physician with over thirty years of experience with
6 infectious diseases, including extensive experience in recent months researching and
7 treating the novel coronavirus SARS-CoV-2 and the disease it causes, COVID-19.

8 7. I am a graduate of Dartmouth College and the Weill Cornell Graduate
9 School of Medical Science at Cornell University. After earning my medical degree, I
10 completed an internship in internal medicine at the University of Pennsylvania and a
11 fellowship in Infectious Disease and Geographic Medicine at Case Western Reserve
12 University, where I was named chief resident and later served on faculty.

13 8. I am currently a professor of medicine and professor of health services,
14 policy, and practice at the Warren Alpert Medical School of Brown University. I have
15 had other academic appointments at Brown University as well, including previously
16 serving as a dean's professor of medical science and the director of the Brown
17 University AIDS Center. I am also a physician at The Miriam Hospital, which is a
18 teaching hospital of Brown University, where I treat patients in the Division of
19 Infectious Diseases.

20 9. Much of my career has been dedicated to researching and treating the
21 deadliest infectious diseases, including HIV/AIDS and Ebola, including on-the-
22 ground work in Liberia where I worked with community health centers to develop
23 procedures to reduce the spread of Ebola,

24 10. My research in the field of infectious diseases and public health has been
25 published in leading peer-reviewed journals, including the *New England Journal of*
26 *Medicine*, the *Journal of Infectious Diseases*, and the *Journal of Clinical Infectious*
27 *Diseases*, and has been funded by prestigious public health organizations including
28 the CDC, the National Institutes of Health (NIH), the National Institute of Allergy and

1 Infectious Diseases (NIAID), and the Substance Abuse and Mental Health Services
2 Administration (SAMHSA) of the U.S. Department of Health and Human Services
3 (HHS). I am also a peer reviewer for several medical journals, including the *New*
4 *England Journal of Medicine* and *Lancet*.

5 11. I am board certified in infectious disease by the American Board of
6 Infectious Diseases and a fellow of the American College of Physicians and the
7 Infectious Disease Society of America.

8 12. My curriculum vitae, including a list of publications, is attached as
9 Exhibit A.

10 13. My opinions are based on my education, training, and experience, as well
11 as my review of publicly available documents cited in this Declaration. If called upon
12 as a witness, I could and would testify competently to the facts and opinions set forth
13 in this declaration.

14 **EXPERIENCE WITH COVID-19**

15 14. Since the discovery of SARS-CoV-2 and the outbreak of COVID-19,
16 much of my work has been devoted to the virus. Every week, I evaluate and treat
17 patients who have or are recovering from COVID-19. Throughout the pandemic, over
18 1,000 COVID-19 patients have been under the care of our infectious disease group.
19 As both a clinician and a medical educator, I teach medical students, interns, and
20 residents how to care for patients with COVID-19 through bedside teaching.

21 15. In addition to treating patients, I have devoted extensive time to
22 researching the characteristics and transmission of SARS-CoV-2 and treatment for
23 COVID-19. In particular, I was a senior co-author of a study published in the *New*
24 *England Journal of Medicine* supporting the compassionate use of the drug
25 Remdesivir, a nucleotide analogue prodrug that inhibits viral RNA polymerases, in
26 patients with severe cases of COVID-19.¹ I have also published a series of papers on

27 ¹ Jonathan Grein et al., *Compassionate Use of Remdesivir for Patients with Severe*
28 *Covid-19*, *New Eng. J. of Med.* (June 11, 2020).

1 clinical manifestations of COVID-19 based on my experienced as a practicing
2 physician and medical educator.²

3 16. I have also advised organizations and stakeholders regarding best
4 practices for mitigating the spread of SARS-CoV-2. Most notably, I was the principal
5 author of the Thomistic Institute's guidelines for re-starting public Mass in Roman
6 Catholic churches.³ In developing those guidelines, I led a working group of
7 infectious disease experts, medical professionals, and clergy to develop guidance in
8 accord with the current standards issued by the World Health Organization (WHO)
9 and the CDC that would allow churches to resume public mass and administer the
10 sacraments (including the Eucharist) in a safe, responsible manner. These guidelines
11 relied on the 3Ws: watch your distance, wear a mask, wash your hands (i.e., good
12 hand hygiene). There have been no documented cases of COVID-19 being contracted
13 at a Catholic church service following the Thomistic Institute guidelines.

14 **TRANSMISSION OF COVID-19**

15 *Mechanics of Transmission*

16 17. SARS-CoV-2 is spread by infectious respiratory droplets that either land
17 on a surface or travel through the air. The current science indicates the virus is
18 primarily spread through exposure of airborne respiratory droplets to our mucous
19 membranes in the nose and the mouth and the airways. The virus is also spread
20 through fomite transmission, which is contact with the virion resting on a surface and
21 then touching the mucous membranes in the mouth, nose, or eyes.

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23 ² E.g., Chantal Tapé et al., *COVID-19 in a Patient Presenting with Syncope and a*
24 *Normal Chest X-ray*, Rhode Island Med. J. (Mar. 26, 2020); Katrina M. Byrd et al.,
25 *SARS-CoV-2 and HIV Coinfection: Clinical Experience from Rhode Island, United*
States, J. of Int'l AIDS Soc'y (June 19, 2020); Vijairam Selvaraj et al., *Short-Term*
Dexamethasone in Sars-CoV-2 Patients, Rhode Island Med. J. (June 19, 2020).

26 ³ Timothy P. Flanigan et al., *Guidelines on Sacraments and Pastoral Care*, Thomistic
27 Inst. (Apr. 28, 2020; updated July 24, 2020); *see also, e.g.*, Paul Cieslak, Timothy
28 Flanigan & Thomas W. McGovern, *Evidence-Based Guidelines to Celebrate Mass*
Safely Are Working, Real Clear Sci. (Aug. 19, 2020).

1 18. The estimated virion dose required to create a successful infection is
2 somewhere around 1,000 virions, though that number may grow as our understanding
3 of the virus progresses. Therefore, it is possible for a person to breathe in an amount
4 of infectious respiratory droplets that is below that threshold and not contract the
5 virus. The key to infection risk is therefore the concept of “viral load”: the quantity
6 of virus in a given volume of body fluid.

7 19. Respiratory droplets come in varied sizes—the larger the droplet, the
8 higher the amount of virions it contains and the higher the viral load. When a person
9 emits respiratory droplets by breathing, speaking, or sneezing, the larger droplets fall
10 quite quickly and only a small amount of the droplets are light enough to diffuse
11 through the air. These small droplets can cover more distance, but they take longer to
12 travel and contain a smaller viral load.

13 20. The amount of respiratory droplets a person emits varies depending on
14 the individual’s respiratory activity. For example, the amount of droplets transmitted
15 from a single breath is somewhere between 50 and 5,000 droplets whereas a sneeze is
16 likely to emit somewhere around 30,000 droplets.

17 21. A large percentage of people who contract COVID-19 either develop no
18 symptoms at all or have minor symptoms that could be mistaken for allergies or a
19 common cold. Persons who are asymptomatic or have minor cases of COVID-19 can
20 still transmit the disease to others. However, it is believed that such individuals shed
21 less of the disease—for example, because they are not sneezing or secreting as much
22 as a person with a more serious case—and their respiratory droplets contain smaller
23 viral loads of SARS-CoV-2.

24 *Effective Mitigation of Transmission*

25 22. Mitigating the spread of SARS-CoV-2 begins with the three Ws: watch
26 your distance, wear your mask, and wash your hands. These three simple steps are the
27 bedrock of any public health strategy for mitigating of spread of SARS-CoV-2, and
28 are reflected widely in guidance from the WHO, CDC, AAP, state departments of

1 health, and countless private and public organizations (including schools and
2 universities) that are responsibly reopening while remaining vigilant against the
3 dangers of COVID-19.

4 23. Maintaining a safe social distance prevents the spread of SARS-CoV-2
5 by limiting the spread of virions between individuals. Larger respiratory droplets
6 (which are capable of carrying a larger viral load) tend to fall to the ground within 3 to
7 5 feet of the individual. While smaller droplets may travel further, those droplets
8 contain a much smaller viral load, meaning a person would have to inhale the airborne
9 droplets over a substantial period of time before being at risk for contracting the virus.

10 24. Virtually all public health guidance concerning COVID-19 includes some
11 recommendation for social distancing. The standard guidance from WHO and CDC is
12 six feet or two meters, which is thought to be a generally safe distance for most forms
13 of activity for most populations. However, there is no magic number, and a
14 reasonably safe distance may be even closer than six feet depending on the setting and
15 other preventative measures.

16 25. The use of masks is also an important measure to mitigate the spread of
17 SARS-CoV-2. Masks work primarily to prevent an infected persons from spreading
18 COVID-19 by trapping large respiratory droplets within the mask,⁴ and they may also
19 have a prophylactic effect for the wearer as well.⁵ Masks also prevent hand-to-mouth
20 or hand-to-nose transmission of fomites.

21 26. Even a simple surgical mask, which can be bought at many stores for a
22 few cents or a few dollars, is effective to prevent and limit the expulsion of respiratory
23 droplets. For example, one published report found that a simple surgical mask
24 protected 100% of studied medical workers who wore a surgical mask and were

25 ⁴ CDC, *About Masks* (updated Aug. 6, 2020), <https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/about-face-coverings.html>.

26 ⁵ Xiaowen Wang et al., *Association Between Universal Masking in a Health Care*
27 *System and SARS-CoV-2 Positivity Among Health Care Workers*, J. of Am. Med. Ass'n
28 (July 14, 2020).

1 exposed for over ten minutes within six feet of a COVID-patient coughing and
 2 generating aerosols in their faces.⁶ Another report found that all 139 customers who
 3 were exposed to an infected hair stylist for more than 15 minutes while wearing a
 4 mask did not contract the virus.⁷

5 27. Basic hand hygiene is the final, critical component of a public health
 6 strategy to prevent the spread of SARS-CoV-2. As noted above, transmission occurs
 7 not only through airborne droplets but also through fomites, whereby a person's hand
 8 touches a surface with droplets containing the virus and then touches his or her mouth
 9 or nose. Hand hygiene—including both hand washing and regular use of hand
 10 sanitizer—kills the virus and prevents further transmission. Relatedly, regularly
 11 cleaning counters, tables, toys, and other surfaces or objects that many people touch
 12 has similar effect in stopping the transmission of the virus.

13 28. No public health strategy ever has as its goal a 0% transmission rate. It is
 14 impossible, particularly with a virus as widespread as SARS-CoV-2, to prevent all
 15 transmission, and efforts to strive towards a 0% transmission rate would have
 16 deleterious costs in terms of economic productivity, mental health, and public trust.
 17 Instead, the goal of public health officials and infectious disease experts is to slow the
 18 rate of transmission to ensure that hospitals and health care workers are not
 19 overwhelmed, while taking extra measures to protect the most vulnerable.

20 **PUBLIC HEALTH GUIDANCE ON SCHOOL REOPENING**

21 ***Role of Public Health Guidance***

22 29. Leading public health organizations, such as the WHO, CDC, and NIH,
 23 play a critical role in providing broadly applicable guidance and setting mitigation
 24 strategy.

25 ⁶ Kangqi Ng et al., *COVID-19 and the Risk to Health Care Workers: A Case Report*,
 26 *Annals of Internal Med.* (June 2, 2020).

27 ⁷ M. Joshua Hendrix, *Absence of Apparent Transmission of SARS-CoV-2 from Two*
 28 *Stylists After Exposure at a Hair Salon with a Universal Face Covering Policy*, MMWR
 (CDC) (July 17, 2020).

1 30. In the United States, the CDC is the nation's leading repository of
2 expertise and working knowledge on how to prevent and mitigate the spread of
3 infectious diseases. The CDC is a trusted, nonpartisan institution that works with its
4 counterpart agencies at the global (e.g., WHO), foreign (e.g., the European Centre for
5 Disease Prevention and Control), and state levels to provide the American people with
6 clear, scientifically valid public health standards.

7 31. The CDC is primarily a repository of knowledge and experience. The
8 CDC, in general, does not have law enforcement authority. Rather, the CDC has
9 traditionally worked hand-in-hand with state departments of health to implement
10 consensus-based, science-backed standards for public health.

11 32. Relying on guidance from organizations such as the CDC is critically
12 important in times like this, where scientists and researchers are working around the
13 globe and around the clock to react to a new viral threat. The CDC and similar
14 organizations are best suited to sort through sometimes-conflicting data and to weigh
15 the various tradeoffs in a non-partisan, public-health-minded manner. Public health
16 guidance from reputable national and international organizations reflects the latest and
17 most rigorously tested scientific knowledge.

18 33. Clear public health guidelines are only half of the equation; it is also
19 important that those guidelines be clearly explained and consistently applied by state
20 law enforcement agencies, including state departments of health. Public health suffers
21 where guidance is inconsistent between similar settings—for example, where a state
22 permits restaurants and movie theaters to open but not churches and synagogues, or
23 where a state imposes many levels of complex and varying standards for different
24 settings. Confusing, complicated, or inconsistent standards can have a negative effect
25 on compliance rates, both because people do not understand what is expected of them
26 and because confidence in public institutions wanes when it appears that certain types
27 of gatherings are being treated more favorably than others.

Public Health Guidance Provides a Blueprint for Safely Reopening Schools

34. Leading public health organizations and experts have endorsed reopening schools where certain safeguards can be met.

35. The most comprehensive and rigorous guidelines for school reopening come from the CDC. In July 2020, the CDC issued a statement on the deleterious effects of school closures on children and the best public health knowledge on the effect of SARS-CoV-2 and COVID-19 on and among children. The CDC concluded, based on the best available research, that “COVID-19 poses relatively low risks to school-aged children,” and that “the rate of infection among younger school children, and from students to teachers, has been low, especially if proper precautions are followed.” On the other hand, the CDC found that extended periods of school closure leads to learning loss, a widening of the educational achievement gap, a delay in social and emotional skill development, increased risk of physical and sexual abuse, food scarcity, and other negative consequences, especially among low-income and minority student populations.⁸

36. Given these conclusions, the CDC has published guidelines to help school administrators safely reopen schools for in-person instruction. These guidelines reflect the type of “proper precautions” that can significantly prevent student-to-student and student-to-teacher/staff transmission of COVID-19, and are based on the best-available science of how to combat the virus.⁹

⁸ CDC, *The Importance of Reopening America’s Schools in the Fall* (July 23, 2020), <https://www.cdc.gov/coronavirus/2019-ncov/community/schools-childcare/reopening-schools.html> (attached hereto as Exhibit B).

⁹ CDC, *Preparing K-12 School Administration for a Safe Return to School in Fall 2020* (updated Aug. 1, 2020), <https://www.cdc.gov/coronavirus/2019-ncov/community/schools-childcare/prepare-safe-return.html> (attached hereto as Exhibit C); CDC, *Considerations for Schools: Operating Schools During COVID-19* (updated Aug. 21, 2020), <https://www.cdc.gov/coronavirus/2019-ncov/community/schools-childcare/schools.html> (attached hereto as Exhibit D).

1 37. The CDC guidelines stress that administrators must “encourage everyone
2 in the school and the community to practice preventive behaviors,” and
3 “communicate, educate, and reinforce appropriate hygiene and social distancing
4 practices in ways that are developmentally appropriate for students, teachers, and
5 staff.”

6 38. The CDC guidance stresses a range of developmentally appropriate
7 mitigation strategies, including primarily “social distancing, cloth face coverings,
8 hand hygiene, and use of cohorting.”

9 39. The CDC guidelines include a range of recommendations to reduce close
10 social interaction and promote social distancing. In addition to recommending six feet
11 of distance wherever practical, the CDC also recommends reconfiguring student
12 seating to promote social distance, reducing class sizes, repurposing “unused or
13 underutilized school spaces” for additional classroom space, and installing physical
14 barriers in areas where it will be difficult to keep six feet apart.

15 40. The CDC also encourages schools to “teach and reinforce use of cloth
16 face coverings.” While recognizing that use of a face mask may not be feasible for
17 younger students, the CDC states that face coverings should be used whenever
18 feasible by teachers, staff, and older students. Administrators are advised to provide
19 clear messaging for when and by whom face coverings should be worn.

20 41. Hand hygiene and general hygiene practices are also a critical part of the
21 CDC’s guidance for in-person instruction. Schools are encouraged to teach and
22 reinforce proper handwashing etiquette and to provide students and adults with hand
23 sanitizer containing at least 60% alcohol. In addition, schools should teach and
24 reinforce proper respiratory etiquette, such as coughing and sneezing into a tissue
25 rather than into the student’s hands or into the air. Similarly, the CDC guidance
26 provides lengthy recommendations for cleaning and disinfecting frequently touched
27 surfaces, such as “playground equipment, door handles, sink handles, and drinking
28 fountains,” as well as school busses and student desks.

42. In addition to these general mitigation strategies, the CDC has recommended certain practices specifically designed for the K-12 school setting, such as eating meals in the classroom, staggering student schedules, and implementing cohorting,” which is a practice where a group of students and teachers stay together throughout the day (including during recreational and meal times) to minimize exposure between cohorts. The CDC also recommends that schools develop policies that will encourage staff, teachers, and students to stay home if they feel sick or have had close contact with someone exposed to COVID-19.

43. The CDC guidance recognizes that the school setting provides an opportunity to educate children about good hygiene practices through both instruction and behavior modeling. The CDC has therefore created resources to help schools educate their students about COVID-19 and healthy practices.

44. Finally, recognizing that not all individuals have the same risk profile, the CDC recommends that schools provide accommodations for teachers/staff and students at higher risk for serious complications, including telework and virtual learning, respectively.

45. The CDC guidance also recommends modification of these practices based on the level of community transmission. Under this framework, school closure should be considered (but not necessarily implemented) only where (a) the community is experiencing “substantial, unrestrained transmission” of COVID-19 and (b) other mitigation strategies are insufficient. “Substantial, unrestrained transmission,” however is an extreme state that, according to the CDC, would entail a shelter-in-place order, and not simply a targeted closure of schools.¹⁰

46. Other public health organizations, similarly, advocate for school reopening if proper precautions can be observed. The AAP—which is expert not only

¹⁰ CDC, *Implementation of Mitigation Strategies for Communities with Local COVID-19 Transmission* tbl. 1 (updated May 27, 2020), <https://www.cdc.gov/coronavirus/2019-ncov/community/community-mitigation.html>.

1 in public health but also childhood development—“strongly advocates that all policy
2 considerations for the coming school year should start with a goal of having students
3 physically present in school.”

4 47. In support of this policy position, the AAP has elaborated on the CDC
5 guidance with their own recommendations for in-person instruction, with specific
6 guidance designed for schools at different levels (pre-K, elementary, and secondary),
7 for schools serving different populations (e.g., special education), and for specific
8 enclosed settings (e.g., busses and hallways). Like the CDC, the AAP stresses the
9 importance of social distancing (though it suggests that student-to-student distancing
10 of just three feet is sufficient), face coverings for all adults and all students who can
11 safely wear one, cleaning and hygiene practices, and cohorting.¹¹

12 48. Similarly, the New York State’s Health Department issued guidance
13 updated on August 26, 2020, which conforms to the public health consensus
14 mentioned above.¹² That guidance, like the CDC and AAP guidance discussed
15 previously, emphasizes the importance of prioritizing reopening in-person instruction
16 and vesting reopening and safety decisions in the hands of “Responsible Parties” at a
17 given school or group of schools through “individual plans.”¹³ The plans that the
18 “Responsible Parties” must develop conform to the public health consensus. That is to
19 say, plans must prioritize reopening consistent with a particular school’s ability to
20 implement its discussed face covering, social distancing, and hygiene practices. This
21 also includes mandatory health screening, increasing a school’s ventilation capability,

22 _____
23 ¹¹ AAP, *COVID-19 Planning Considerations: Guidance for School Re-entry* (updated
24 Aug. 19, 2020), [https://services.aap.org/en/pages/2019-novel-coronavirus-covid-19-](https://services.aap.org/en/pages/2019-novel-coronavirus-covid-19-infections/clinical-guidance/covid-19-planning-considerations-return-to-in-person-education-in-schools/)
infections/clinical-guidance/covid-19-planning-considerations-return-to-in-person-
education-in-schools/ (attached hereto as Exhibit E).

25 ¹² See New York State Department of Health, *Interim Guidance For In-Person Instruc-*
26 *tion At Pre-K To Grade 12 Schools During the COVID-19 Public Health Emergency*,
27 [https://www.governor.ny.gov/sites/governor.ny.gov/files/atoms/files/Pre-](https://www.governor.ny.gov/sites/governor.ny.gov/files/atoms/files/Pre-K_to_Grade_12_Schools_MasterGuidance.pdf)
K_to_Grade_12_Schools_MasterGuidance.pdf. (Attached as Exhibit F).

28 ¹³ *Id.* at 1.

and contact tracing plans.¹⁴ The guidance also recognizes, consistent with CDC guidance, that in-person instruction must be especially prioritized for “younger students, low-income students, special education students, English Language Learners, and those with limited access to technology.”¹⁵ Recognizing that schools do not exist in a vacuum, the New York guidance also encourages schools to “create partnerships” with “community-based organizations,” including “culture” organizations within a given community.¹⁶

49. Foreign and international public health organizations have adopted similar guidelines for school reopening.¹⁷

Schools That Can Comply with Public Health Guidance Can Reopen Safely

50. As a matter of public health, it is clear that schools can safely reopen for in-person instruction.

51. The question of whether a particular school or school system can reopen should focus on the specific safety and mitigation risks in place in that school or school system. If a school or school system is able to implement CDC guidelines for social distancing, face coverings, and hygiene and has policies in place to encourage sick, potentially exposed, and at-risk individuals to stay home, then reopening that school should be considered reasonably safe.

52. In determining an approach for opening schools, public policy makers should be guided by CDC guidance applied to the ability of specific schools to safely

¹⁴ See, e.g., *id.* at 1-3.

¹⁵ *Id.* at 9.

¹⁶ *Id.*

¹⁷ E.g., WHO, *Considerations for School-Related Public Health Measures in the Context of COVID-19* (May 10, 2020), https://apps.who.int/iris/bitstream/handle/10665/332052/WHO-2019-nCoV-Adjusting_PH_measures-Schools-2020.1-eng.pdf?sequence=1&isAllowed=y; Royal College of Paediatrics & Child Health, *Open Letter from UK Paediatricians About the Return of Children to Schools* (June 17, 2020), https://www.rcpch.ac.uk/sites/default/files/2020-06/open_letter_re_schools_reopening_2020-06-17.pdf.

1 reopen. Public policy approaches that make school-closure decisions based on
 2 communitywide measures, except in the case of a shelter-in-place scenario, are
 3 contrary to public health and needlessly harmful to students.

4 **THE APPROACH OF NEW YORK’S “CLUSTER ACTION INITIATIVE” TO**
 5 **IN-PERSON INSTRUCTION IS ARBITRARY**
 6 **AND CONTRARY TO SCIENCE**

7 53. I have reviewed the State of New York’s guidance to implement
 8 Governor Cuomo’s Executive Order (Order 202.68) regarding the “Cluster Action
 9 Initiative.”¹⁸ Under this guidance, schools in designated “red” or “orange” zones must
 10 generally close for in-person instruction. Neither the Executive Order nor the guidance
 11 specifies what “science-based approach to contain these clusters” was supposedly
 12 developed so, at this time, I cannot evaluate it (though I reserve the right to revise my
 13 conclusions upon production of the government’s “science-based approach”).¹⁹ But,
 14 what is clear is that, if a school finds itself in either a “red” zone (the “cluster itself”)
 15 or an “orange” zone, it must remain closed so long as these rules are in effect (which
 16 the guidance specifies as “a minimum of 14 days,” and the Executive Order notes that
 17 it lasts until November 5, 2020).

18 54. While both “red” and “orange” zones generally close in-person
 19 instruction, they permit a wide array of other activities, as the guidance details. In
 20 “red” zones, houses of worship may still meet under certain capacity restrictions,
 21 restaurants and taverns may still be open for takeout and delivery service, and all

22 ¹⁸ State of New York, Guidance For Determining Whether A Business Enterprise Is
 23 Subject To A Workforce Reduction Under Executive Order 202.68, Related To New
 24 York’s Cluster Action Initiative To Address COVID-19 Hotspots (last updated Oct. 7,
 25 2020), <https://esd.ny.gov/ny-cluster-action-initiative-guidance>. (Attached as Exhibit
 26 G).

27 ¹⁹ According to the Executive Order, these standards are determined by the Department
 28 of Health. *See* Office of the Governor of New York, Executive Order 202.68, Continu-
 ing Temporary Suspension and Modification of Laws Relating to the Disaster Emer-
 gency, <https://www.governor.ny.gov/news/no-20268-continuing-temporary-suspension-and-modification-laws-relating-disaster-emergency>.

1 manner of “essential” businesses—including child care services and higher education
2 research—may also remain open in some capacity. In “orange” zones, these essential
3 businesses may remain open, the capacity limitations are less restrictive on gatherings
4 at houses of worship, and “non-essential gatherings shall be limited to 10 people.” In-
5 person instruction, however, must generally remain closed. Given this effect, I will
6 refer to this Executive Order and its corresponding guidance as the “School Closure
7 Order.”

8 55. The New York School Closure Order is contrary to the public health
9 consensus that the decision to open or not open schools should be focused on the
10 safety profile of the individual school or school system. Neither the CDC guidance
11 nor the AAP guidance discussed above mandates the indefinite closer of “clusters” or
12 “zones” of in-person instruction while allowing all manner of activities—including
13 related activity that happens at schools, like child care or higher education research—
14 to continue. This is not an effective or rational public health strategy—as New York’s
15 own Health Department evidenced by setting forth reopening guidance consistent with
16 that issued by CDC.

17 56. In stark contrast, New York’s School Closure Order also lumps all
18 schools in each “red” or “orange” zone together, without recognizing the difference
19 between large public schools and individual private schools, which can put in place
20 measures that allow for safe distancing that can mitigate transmission. And, rather
21 than encourage engagement between a community’s cultural organizations and its
22 schools, the School Closure Order indefinitely closes in-person instruction while
23 permitting a variety of community activities to continue to some extent.

24 57. The CDC has explained that school closure decisions based on
25 community transmissions are appropriate only where the community is experiencing
26 substantial, unrestrained transmission. In such scenarios, though, transmission
27 significant enough to warrant a blanket school closure order should be accompanied
28

1 by a farther-reaching, communitywide shelter-in-place order, a policy measure that
2 New York's School Closure Order does not implement.

3 58. In fact, as discussed above, far from imposing a broad shelter-in-place
4 order, New York's School Closure Order permits other comparable and even higher
5 risk activities to resume in the same communities where in-person education remains
6 forcibly closed.

7 59. Daycare facilities in the "red" or "orange" zones provide a prime
8 example of the New York's disparate treatment of K-12 schools. New York's School
9 Closure Order permits child-care activities within those "zones" to remain open as
10 "essential," subject to state guidelines involving face coverings, social distancing, and
11 hygiene.²⁰ The state has also issued similar guidance for day camps.²¹

12 60. There is no public health rationale for treating K-12 schools differently
13 from daycare facilities and day camps, many of which provide instruction. From a
14 public health perspective, there is very little difference, for example, between a four-
15 year old learning letters in a daycare facility and a five-year old learning to write her
16 name in kindergarten. In fact, to the extent the risks vary, daycare poses a greater risk
17 than K-12 education, as pre-school-aged children cannot be expected to observe social
18 distancing and require more physical contact (e.g., diaper changes) than school-aged
19 children. Having determined that certain restrictions short of a complete shutdown are
20 sufficient to allow children to spend hours a day in camp or in daycare, the State
21 cannot credibly say there is a public health need to wholly close down schools in those
22 same communities.

23 61. It makes no sense for conduct to be permitted or not permitted simply by
24 how it is labeled. In fact, such arbitrary distinctions can be detrimental to public

25 ²⁰ See Guidance Documents, New York Office of Children and Family Services, Divi-
26 sion of Child Care Services, <https://ocfs.ny.gov/programs/childcare/#covid-guidance>.
(last visited Oct. 16, 2020).

27 ²¹ See *id.* at "Interim Guidance for Child Care and Day Camp Programs." (last visited
28 Oct. 16, 2020).

1 health, as people see the states as hapless or engaging in favoritism. If a school
2 facility in a “red” or “orange” zone can be safely used to provide day care to
3 government employees, they can also be opened—under the same health and safety
4 protocols—to other children for in-person instruction. The effect or virality of SARS-
5 CoV-2 does not vary based on the reason why children are in a given facility.

6 62. I have read the reopening plan submitted by the school at issue in this
7 case and approved by the State. It is my understanding that the school has
8 implemented social distancing and other hygiene protocols. It is also my
9 understanding that the school plans to test all students and staff for COVID-19 before
10 returning to school on October 27. In these circumstances, I am not aware of any
11 reason why the government should insist on keeping the school closed.

12 CONCLUSION

13 63. Based on my decades of experience as a physician, educator, and
14 researcher in the fields of infectious disease and public health, it is my opinion that
15 schools can safely reopen for in-person instruction provided appropriate safeguards—
16 namely, those outlined in the State’s, CDC’s, and AAP’s guidance, including social
17 distancing, face coverings, and hand hygiene—are followed. In determining whether
18 a particular school or school system should be permitted to reopen, public health
19 officials should focus on the ability of the individual school or school system to
20 follow appropriate public health guidance rather than issue broad, community-based
21 pronouncements. In addition, to the extent that other, similarly situated social
22 gatherings are allowed to resume, schools should also be permitted to resume in-
23 person instruction on equal terms.

24
25 I declare under penalty of perjury that the foregoing is true and correct.

26
27 Executed: October 16, 2020, in Providence, Rhode Island

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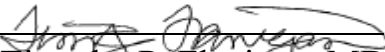
by: 
Timothy P. Flanigan, MD

EXHIBIT A
TO DECLARATION OF
TIMOTHY P. FLANIGAN, MD
(EXHIBIT 4)

**CURRICULUM VITAE
TIMOTHY PALEN FLANIGAN, M.D.**

Updated: Aug 2020

PERSONAL INFORMATION

Home Address: 127 Highland Ave, Tiverton, RI 02878
Business Address: The Miriam Hospital
Division of Infectious Diseases
164 Summit Avenue
Providence, Rhode Island 02906-2894
Business Telephone: (401) 793-7152
Business Fax: (401)-793-4701
E-Mail Address: tflanigan@lifespan.org



EDUCATION

Undergraduate 1975-1979 BA, Dartmouth College Hanover, New Hampshire. Liberal Arts.
Medical School 1979-1983 MD, Cornell University Medical College, New York, New York
Theology Studies 2012-2018 MA, Providence College, Masters in Theology Studies, Providence, RI

POSTGRADUATE TRAINING

Residency: 1983-1986 Intern and Resident, Internal Medicine, Hospital of the University of Pennsylvania, Philadelphia, PA.
Fellowship: 1986-1988 Infectious Diseases and Geographic Medicine. Case Western Reserve University, Cleveland, OH.
Chief Residency: 1988-1989 Infectious Diseases and Geographic Medicine. Case Western Reserve University, Cleveland, OH, Cleveland VA Medical Center.

POSTGRADUATE HONORS AND AWARDS

| | |
|-----------|--|
| 1983 | US Navy Medical Research Course of Instruction in Clinical Tropical Medical Research / Certificate of Completion |
| 1990 | Burroughs Wellcome-NFID Young Investigator's Award |
| 1991 | Sponsorship of Irwin Lapin Student Research Award |
| 1992 | Community of Fall River, MA for Dedicated Service to AIDS Awareness in the Community / Citation in Gratitude |
| 1994 | Brown University MEDAC Partnership Program, Certificate of Appreciation for Contributions to Minority Biomedical Education |
| 1994 | Annals of Internal Medicine Editors / Exceptional Reviewer |
| 1995 | The Ruth & May Alperin Schechter Day School talk on Infectious Diseases to students from Rabbi Andrea M. Gouze / In Appreciation |
| 1995-1996 | The Miriam Hospital Excellence in Academic Medicine Award |
| 1996 | Brown University School of Medicine / Graduation speaker |
| 1996 | Brown University Faculty Teaching Award |

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| 1996 | AIDS Services after Prison Project from The Ford Foundation / Harvard University Innovations in American Government Award |
| 1997 | Case Western Reserve University / Honors Efforts in Sponsoring the Research Efforts of Selvi B. Williams and by participation in Lepow Student Research Day |
| 1997-1999 | Brown University School of Medicine Graduation Procession Marshall |
| 1999 | The Miriam Hospital House Staff Class of 1999 / Dedication and Teaching Certificate |
| 1999 | RI Department of Health and Memorial Hospital of RI National Health Services Corps (SEARCH) / Recognition for Contributions |
| 1999-2000 | American Academy of Family Physicians / Active Teacher in Family Medicine Award |
| 2000 | Robert Wood Johnson Community Health Leadership Award |
| 2002 | Thundermist Health Center, Woonsocket, RI / Francesco Cannistra MD Memorial Award. |
| 2003 | Brown Medical School 3 rd & 4 th Year Students / Profiles in Competence Award for Ability II - Using Basic Science in the Practice of Medicine |
| 2004 | Salve Regina University Invited Graduation Speaker and Honorary Degree, Dr. of Humane Letters |
| 2004 | BIOL 282 – Pathophysiology / Infectious Disease, Alpert Medical School of Brown University / Dean's Excellence in Teaching Award |
| 2004 | Brown Faculty Award for Teaching Brown Medical Students the Art of Serving Humanity |
| 2006 | HIVMA Advocacy Award Presented at the 44 th IDSA/HIVMA Conference |
| 2007 | The George Naff Cleveland VAMC Leadership Award |
| 2007-2008 | Castle Connolly Medical Ltd, America's Top Doctor |
| 2009 | CDC/ATSDR Partners in Public Health for HIV Implementation Guidance in Correctional Settings (GP DHAP) / Honors Award |
| 2009 | CDC National Center for HIV/AIDS, Viral Hepatitis, STD and TB Prevention Award |
| 2009-2010 | State of Rhode Island Department of Health Department of Health / Certificate of Recognition for Outstanding Service in Response to the H1N1 Flu Pandemic |
| 2010 | Castle Connolly Medical Ltd, America's Top Doctor |
| 2011-2012 | Best Doctors in America |
| 2012 | Rhode Island Foundation Service to the Medical Research Advisory Committee / Certificate of Appreciation |
| 2012 | University of Mississippi Medical Center Lecture on Hope & Despair: Lessons Learned from Global HIV Epidemic / In Grateful Appreciation |
| 2012 | Clinton Global Initiative / Commitment to Action to Develop New Program to Reduce Racial and Geographic Disparities in HIV and Hep C Infection in Southwest Philadelphia |
| 2013 | Brown University BIOL 3653 IMS II: Microbiology / Infectious Disease at Alpert Medical School / Excellence in Teaching Award |
| 2013 | Brown University / Advancing HIV/AIDS Research and Clinical Care Award Honoring Extraordinary Commitment |
| 2014 | Ebenezer Baptist Church Plaque for Service during the Ebola Epidemic |
| 2015 | Liberian Community of Rhode Island Appreciation Award in Recognition of Services to Liberia, West Africa during the Ebola Crisis |
| 2015 | Sister Ann Keene Community and Faith Service Heroes of Faith Award from Rhode Island State Council of Churches |
| 2015 | Tiverton Lions Club and Citation from the State of Rhode Island / Heart of a Lion and Citizen of the Year Award |
| 2016 | Mount Saint Mary College Honorary Doctorate Degree and Commencement Speaker |
| 2016 | Providence College Honorary Doctoral Degree |
| 2017-2018 | Brown University HIV/Viral Hepatitis Co-Infection Clinic Certificate of Appreciation for Serving as a Partner Organization for Alpert Medical School Navigation Partnership Program |

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| 2018 | The Miriam Hospital Certificate of Recognition for Outstanding Contributions to Enhancing Patient Experience (CARE) |
| 2019 | Milton Hamolsky Lifetime Achievement Award from American College of Physicians, Rhode Island Chapter |
| 2019 | Brown Alpert Medical School Excellence in Teaching Award in a Clinical Elective |
| 2019 | Myra Kraft Community MVP Award Celebrating Volunteerism Patriots Foundation for Star Kids Scholarship Program |

PROFESSIONAL LICENCES AND BOARD CERTIFICATION

Diplomate, National Board of Medical Examiners, 1984
 Diplomate, American Board of Internal Medicine, 1986
 Diplomate, American Board of Infectious Diseases, 1988

ACADEMIC APPOINTMENTS

| | |
|--------------|--|
| 1988-1989 | Chief Medical Resident, University Hospitals of Cleveland |
| 1989-1991 | Senior Instructor and Assistant Professor, Case Western Reserve University; Division of Geographic Medicine, University Hospitals of Cleveland |
| 1991-1996 | Assistant Professor of Medicine, Brown University School of Medicine |
| 1996-1999 | Associate Professor of Medicine, Brown University School of Medicine |
| 2004-present | Professor of Medicine in the Research Scholar Track, Brown University School of Medicine |
| 2010-2013 | Dean's Professor of Medical Science, Brown University |
| 2011-2024 | Professor of Health Services, Policy, & Practice in the Research Scholar Track |
| 2012-2015 | Scientific Director of HIV Care, Immunology, The Miriam Hospital |
| 2012-2015 | Director of the Brown University AIDS Center |

HOSPITAL APPOINTMENTS

| | |
|--------------|--|
| 1991-present | Active Staff Physician, The Miriam Hospital |
| 1992-1999 | Director, Division of Geographic Medicine and Clinical Immunology, The Miriam Hospital |
| 1999-present | Active Staff Physician, Rhode Island Hospital |
| 1999-2012 | Director, Division of Infectious Diseases, The Miriam and Rhode Island Hospitals |
| 2013-2014 | Active Staff Physician, SSTAR (Stanley Street Treatment & Resources) |
| 2015-2017 | Director, Lifespan Lyme Disease Clinic, Newport Hospital |
| 2015-2017 | Active Staff Physician, Lifespan Lyme Disease Clinic, Newport Hospital |

OTHER APPOINTMENTS

| | |
|-----------|---|
| 1987-1991 | AIDS Housing Council Board Member, Cleveland, Ohio (Board President 1990) |
| 1988-1991 | University Hospitals of Cleveland Residency Education Committee |
| 1989-1991 | AIDS Clinical Trials Groups (ACTG); NIH Enteric Pathogen Study Group |
| 1991-1998 | Sunrise Community Housing, now AIDS Care Ocean State Board Member |
| 1996 | NIH Development Group (Collaborative Mucosal Immunity Group) National Collaborative Vaccine Chair (Feb) |
| 2002 | NIH/NIAID Topical Microbicides Program Project Reverse Site Visit. Washington DC (Jan) Reviewer |
| 2002-2007 | NIH/NIDA Data Safety Management Board (DSMB) for CTN-0055, Multi-site African American Couples, Rockville, MD Member and Reviewer |
| 2004-2008 | NIH Clinical Research Review Committee, National Center for Research Resources |

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| 2004-2008 | NIH/NCRR Clinical Research Review Committee (CRRC), Bethesda, MD Member |
| 2004-2010 | Doctors of the World Board of Directors Member |
| 2005-2009 | NIH Sponsored GCRC Standing Grant Review Committee Member |
| 2005-2007 | US Agency for International Development (USAID) Advisory Committee on Voluntary Foreign Aid (ACVFA), |
| 2007-2009 | CDC & NIH Working Group on Cryptosporidiosis and Bacterial Enteric Infections Treatment Guidelines Committee Chairman |
| 2008 | Clinical and Translational Science Member Editorial Board |
| 2009 | Society of Correctional Physicians Member |
| 2010 | Journal of Clinical and Translational Sciences Associate Editor |
| 2010 | NIH Support for Conferences and Scientific Meetings (Parent R13/U13) Grant reviewer |
| 2010-present | Rhode Island Foundation Medical Research Advisory Committee Member Reviewer |
| 2012-present | Brown Adjunct Faculty Reviewer |
| 2012-2013 | Data Safety Management Board (DSMB) Meeting CTN-0055 for NIDA Choices |
| 2014 Sep-Oct | Catholic Medical System to Combat the Ebola Epidemic in Monrovia, Liberia. Volunteered |
| 2014 | NIH Loan Repayment Program Scientific Review Panel |
| 2017-2018 | Rhode Island Adult Correctional Institution (ACI) Administrator of Primary Care Services |
| 2018 | AIDS Care Ocean State (ACOS), Sunrise House Medical Director & Managing Physician |
| 2019 | NIMH HIV/AIDS R25 (PAR-17-485) Program Reviewer |

HOSPITAL COMMITTEES

| | |
|--------------|--|
| 1999-2013 | Lifespan Research Advisory Committee |
| 2000-2010 | University Medical Foundation Finance Committee |
| 2004-present | Fogarty Executive Committee |
| 2007-present | International Programs Committee Member |
| 2007-2012 | Education and Research Vision Committee Member |
| 2009-2010 | TMH-RIH Clinical Services Review Committee |
| 2010-2012 | Infectious Diseases and Epidemiology Advisory Committee Co-Chair |
| 2014-present | Clinical Competency Committee Member |
| 2015-present | Academic Mentoring Committee Member |
| 2017-present | Cape Verde Community HIV/AIDS Partnership Member |
| 2015 | Clinical AIDS Task Force Committee (CAFT) |
| 2019 | The Miriam Hospital Foundation Governor Committee |

UNIVERSITY COMMITTEES

| | |
|--------------|---|
| 1992-1995 | AIDS Program Member and Associate Director at Brown University |
| 1993-present | Fogarty Program, International Health Institute Executive Committee |
| 1997 | Faculty Development Workshop / Promotion Issues Sessions Panelist |
| 1999 | Infectious Disease Physician Search Committee Chair |
| 1999-2008 | International Health Institute Executive Committee |
| 2002-2003 | Rheumatology Chief Search Committee Chair |
| 2005-present | Center for AIDS Research (CFAR) Committee Member |
| 2007 | Research Dean and Vice President Search Committee Member |
| 2007-2011 | CTSA Planning Grant Committee Chair |
| 2007-present | Scholarly Concentration in Global Health Member |
| 2008-present | Global Health Executive Committee Member |
| 2008-2011 | International Programs Committee Co-Chairman |
| 2008-2009 | Infectious Disease Physician Search Committee Chair |

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| 2009 | Integrating Research Across the University and Teaching Hospitals Committee Member |
| 2009 | Vice President International Affairs Search Committee |
| 2009 | Chair Molecular Microbiology and Immunology Search Committee Member |
| 2009-2010 | Advisory Committee Member to the Search Committee for the Chair of the Department of Medicine |
| 2009-present | Brown Residency International Global Health Track Executive Committee Member |
| 2009-2012 | Medical Faculty Executive Committee for Alpert Medical School Vice Chair |
| 2010 | Brown University and Women & Infants Hospital National Center of Excellence in Women's Health Grant Reviewer, Seed Grant |
| 2010-2012 | Haiti Response Committee Member |
| 2010-present | Framework Global Health Scholars Program & Foreign Studies Fellowship Reviewer |
| 2012-2014 | Brown Center for AIDS Research (CFAR) Chair |
| 2013 | 250 th Brown Anniversary "In Deo Speramus" Steering Committee Member |
| 2015 | Scholarly Oversight Committee (SOC) Member |
| 2015 | Framework Executive Committee Member |
| 2015 | Clinical AIDS Task Force Committee Member |
| 2016-present | Fogarty Foundation for Individuals w/ Intellectual & Developmental Disabilities Board Member |
| 2019 | Emerging Infectious Disease Scholars (EIDS) Executive Committee Member |
| 2019 | Center of Biomedical Research Excellence (COBRE) on Opioids and Overdose Executive Committee and Deputy Core Director |

MEMBERSHIP IN SOCIETIES

American College of Physicians, Fellow
 Infectious Disease Society of America, Fellow
 American Federation for Clinical Research
 International AIDS Society
 Society of Correctional Physicians
 American Clinical and Climatological Association

NON-MEDICAL LEADERSHIP ROLES

| | |
|--------------|--|
| 1994-present | Developed local community-based NGOs for tuition support and mentoring for children of incarcerated parents to provide educational support to break the cycle of substance-abuse and incarceration. |
| 1994-present | Rhode Island Sponsoring Education (RISE), Cofounder and Board Member |
| 2000-present | Newport Starkids and New Bedford Starkids, Founder and Chairman of the Board |
| 2000-present | World Youth Alliance (WYA) to promote the dignity of the human person, Board Member |
| 2007-2010 | Salve Regina University Board of Trustees Member |
| 2007-present | Beyond Narnia: The Fiction of CS Lewis. UVIN 400 Course Created for Brown undergraduates. This course has been cited as one of the best courses for undergraduates at Brown by the student evaluations in 'MyCourses'. |
| 2010-present | Portsmouth Abbey School Board of Regents Co-chair |
| 2010-present | Portsmouth Abbey School Student Life Committee Board Member |
| 2010-present | Portsmouth Institute Steering Committee Member |
| 2010-present | Portsmouth Abbey School Annual STD Lectures / Gender Specific |

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|--------------|---|
| 2012-present | Catholic Diocese of Providence Ordained Permanent Deacon and Presiding Deacon at Saint Christopher's and Saint Theresa's Churches in Tiverton, RI |
| 2013-present | Saint Philomena's School in Portsmouth – Lectures for Grade School Pupils |
| 2017-present | Fertility Education and Medical Management (FEMM), Chairman of the Board |

ORIGINAL PUBLICATIONS IN PEER-REVIEWED JOURNALS:

1. Hoffman SL, **Flanigan TP**, Klaucke D, Leksana B, Rockhill RC, Punjabi NH, Pulungsih, Sutomo A, Moehtar, MA. The widal slide agglutination test, a valuable rapid diagnostic test in typhoid fever patients at the infectious disease's hospital of Jakarta. (1986) *Am J Epidemiol.* May; 123(5): 869-75. PMID: 3962968
2. Weist PM, **Flanigan TP**, Salata RA, Shlaes DM, Katzman M, Lederman M. Serious infectious complications of corticosteroid therapy for chronic obstructive pulmonary disease. (1989) *Chest.* Jun; 95(6): 1180-4. PMID: 2721249
3. **Flanigan TP**, King CH, Lett RR, Nanduri J, Mahmoud AA. Induction of resistance to *Schistosoma mansoni* infection in mice by purified parasite paromyosin. (1989) *J Clin Invest.* Mar; 83(3): 1010-4. PMID: 2493482. PMCID: PMC303778
4. **Flanigan TP**, Aji T, Marshall R, Soave R, Aikawa M, Kaetzel C. Asexual development of *Cryptosporidium parvum* within a differentiated human enterocyte cell line. (1991) *Infect Immun.* Jan; 59(1): 234-9. PMID: 1987037. PMCID: PMC257732
5. Foster CB, **Flanigan TP**, Kazura JW, Dumenco LL, Ratnoff OD. Inhibition of the activation of Hageman Factor (Factor XII) and of platelet aggregation by extracts of *Brugia malayi* microfilariae. (1991) *J Lab Clin Med.* May; 117(5): 344-52. PMID: 1902251
6. Aji T, **Flanigan TP**, Marshall R, Kaetzel C, Aikawa M. Ultrastructural study of asexual development of *Cryptosporidium parvum* in a human intestinal cell line. (1991) *J Protozool.* Nov-Dec; 38(6): 82S-4S. PMID: 1818219
7. **Flanigan TP**, Marshall R, Redman D, Kaetzel C, Ungar B. In Vitro screening of therapeutic agents against *Cryptosporidium*: Hyperimmune cow colostrum is highly inhibitory. (1991) *J Protozool.* Nov-Dec; 38(6): 225S-7S. PMID: 1818181
8. Marshall MS, **Flanigan TP**. Paromomycin inhibits *Cryptosporidium* infection of a human enterocyte cell line. (1992) *J Infect Dis.* Apr; 165(4): 772-4. PMID: 1552210
9. **Flanigan TP**, Whalen C, Turner J, Soave R, Toerner J, Havlir D, Kotler D. *Cryptosporidium* infection and CD4 counts. (1992) *Ann Int Med.* May; 116(10): 840-2. PMID: 1348918
10. Armitage K, **Flanigan TP**, Carey J, Frank I, MacGregor RR, Ross P, Goodgame R, Turner J. Treatment of cryptosporidiosis with paromomycin. (1992) *Arch Int Med.* Dec; 152(12): 2497-9. PMID: 1456862
11. Foster C, **Flanigan TP**, DeStigter KK, Blanton R, Dumenco LL, Gallagher C, Ratnoff O. Inhibition of the activation of Hageman factor (Factor XII) by extracts of *Schistosoma mansoni*. (1992) *J Lab Clin Med.* Nov; 120(5): 735-9. PMID 1431502
12. Lahorra JM, Haaga JR, Stellato T, **Flanigan T**, Graham R. Safety of intracavitary urokinase with percutaneous abscess drainage. (1993) *AJR Am J Roentgenol.* Jan; 160(1): 171-4. PMID: 8416619
13. Kalayjian RC, Cohen ML, Bonomo, RA, **Flanigan TP**. Cytomegalovirus ventriculo-encephalitis in AIDS. A Syndrome with distinct clinical and pathologic features. (1993) *Medicine (Baltimore).* Mar; 72(2): 67-77. PMID: 8386795
14. **Flanigan TP**, Cu-Uvin S, Fiore T, Vigilante K, Kizirian J, Carpenter CC. HIV Infection in Rhode Island Woman. (1993) *RI Med.* Sep; 76(9): 459-60, 465-6. PMID: 8219396
15. Wiest PM, Johnson JH, **Flanigan TP**. Microtubule Inhibitors Block *Cryptosporidium parvum* infection of a human enterocyte cell line. (1993) *Infect Immun.* Nov; 61(11): 4888-90. PMID: 8406890. PMCID: PMC281249
16. Dixon PS, **Flanigan TP**, DeBuono BA, Laurie JJ, DeCiantis ML, Hoy J, Stein M, Scott HD, Carpenter CCJ. Infection with the Human Immunodeficiency Virus in Prisoners: Meeting the Health Care Challenge. (1993) *Am J Med.* Dec; 95(6): 629-35. PMID: 8259780

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17. White AC Jr, Chappell CL, Hayat CS, Kimball KT, **Flanigan TP**, Goodgame RW. Paromomycin for cryptosporidiosis in AIDS: a prospective, double-blind trial. (1994) *J Infect Dis.* Aug; 170(2): 419-24. PMID: 8035029
18. **Flanigan TP**. Human immunodeficiency virus infection and cryptosporidiosis: Protective immune responses. (1994) *Am J Trop Med Hyg.* 50(5 Suppl): 29-35 PMID: 8203720
19. Newman SL, **Flanigan TP**, Fisher A, Rinaldi MG, Stein M, Vigilante K. Clinically significant candidal mucositis resistant to high dose fluconazole in patients with acquired immunodeficiency syndrome. (1994) *Clin Infect Dis.* Oct; 19(4): 684-6. PMID: 7803632
20. Boardman LA, Peipert JF, Cooper AS, Cu-Uvin S, **Flanigan T**, Raphael SI. Cytologic-histologic discrepancy in human immunodeficiency virus-positive women. (1994) *Obstet Gynecol.* Dec; 84(6): 1016-20. PMID: 7970456
21. Simon DM, Cello JP, Valenzuela J, Levy R, Dickerson G, Goodgame R, Brown M, Lyche K, Fessel WJ, Grendell J, Wilcox CM, Afdhal N, Fogel R, Reeves-Darby V, Stern J, Smith O, Graziano F, Pleakow D, **Flanigan T**, Schubert T, Loveless M, Eron L, Basuk P, Bonacini M, Orenstein J. Multicenter trial of octreotide in patients with refractory acquired immunodeficiency syndrome-associated diarrhea. (1995) *Gastroenterology.* Jun; 108(6): 1753-60. PMID: 7768380
22. Ramratnam B, Gollerkeri A, Schiffman FJ, Rintels P, **Flanigan TP**. Management of persistent B19 parvovirus infectious in AIDS. (1995) *Br J Haematol.* Sep; 91(1): 60-92. PMID: 7577659
23. Ramratnam B, Parameswaran J, Elliot B, Schiffman FJ, Rich JD, **Flanigan TP**. Short course dexamethasone for thrombocytopenia in AIDS. (1996) *Amer J Med.* Jan; 100(1): 117-8. PMID: 8579076
24. Neill MA, Rice SK, Ahmad NV, **Flanigan TP**. Cryptosporidiosis: An unrecognized cause of diarrhea in elderly hospitalized patients. (1996) *Clin Infect Dis.* Jan; 22(1): 168-70. PMID: 8824990
25. **Flanigan T**, Ramratnam B, Graeber C, Hellinger J, Smith D, Wheeler D, Hawley P, Heath-Chiozzi M, Ward DJ, Brummitt C, Turner J. Prospective trial of paromomycin for cryptosporidiosis in AIDS. (1996) *Am J Med.* Mar; 100(3): 370-3. PMID: 8629685
26. **Flanigan TP**, Uvin SC, Rich JD, Mileno MD, Vigilante K, Tashima K. Update of HIV and AIDS in North America. (1996) *Med Health R I.* May; 79(5): 180-7. PMID: 8665432
27. Geletko S, Segarra M, Mayer KH, Fiore TC, Bettencourt FA, **Flanigan TP**, Dudley MN. Electronic compliance assessment with antifungal prophylaxis in HIV-infected women. (1996) *Antimicrob Agents Chemother.* Jun; 40(6): 1338-41. PMID: 8725997. PMCID: PMC163327
28. Cu-Uvin S, **Flanigan TP**, Rich JD, Mileno MD, Mayer KH, Carpenter CCJ. Human immunodeficiency virus infection and acquired immunodeficiency syndrome among North American women. (1996) *Am J Med.* Sep; 101(3):316-22. PMID: 8873494
29. Busch MP, Collier A, Gernsheimer T, Carrington JD, **Flanigan TP**, Kashkari M, Kennedy M, Kumar PN, Lane TA, Mellors JW, Mohandas K, Pollard RB, Viele M, Yomtovian R, Holland PV, McCurdy PR, VATS Group. The viral activation transfusion study (VATS): rationale, objectives, and design overview. (1996) *Transfusion.* Oct; 36(10):854-9. PMID: 8863770
30. Feller AA, **Flanigan TP**. Point of view: HIV and competitive athletics – assessing the real risk of infection. (1996) *Med Health R I.* Oct; 79(10): 362-4. PMID: 8942180
31. Mylonakis E, Rich JD, **Flanigan T**, Kwakwa H, De Orchis DF, Boyce J, Mileno MD. Muscle abscess due to *Aspergillus fumigatus* in a patient with AIDS. A Brief Report. (1996) *Clin Infect Dis.* Dec; 23(6): 1323-4. PMID: 8953087
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7. Kumarasamy N, **Flanigan T**, Mahajan A, Amalraj RE, Mayer K, Solomon S. Comparative study of chronic diarrhea in persons with HIV in South India. (Abstract: MoPeB2268) XIII International AIDS Conference, Durban, South Africa. Jul 9-14, 2000
8. Markowitz M, Hu J, Louie M, Barsoum S, Hurley A, **Flanigan T**, Pierce A, Shaefer M, Nixon D. An open label trial of abacavir (ABC) and amprenavir (APV) in combination with lamivudine (3TC) and indinavir (IND) to treat primary and early HIV-1 infection. (Abstract: 1308) XIII International AIDS Conference, Durban, South Africa. Jul 9-14, 2000
9. Pugatch D, Levesque B, Strong L, Lally M, Brown L, **Flanigan T**. HIV Testing Among High Risk Adolescents and Young Adults: Feasibility and acceptability in substance abuse treatment settings. Society for Adolescent Medicine Conference. 2000
10. Pugatch D, Levesque B, Greene S, Strong L, **Flanigan F**, Lally M. HIV Testing in the Setting of Inpatient Substance Abuse Detoxification Services; A Patient Survey. 12th Annual National HIV/AIDS Update Conference. American Federation for AIDS Research (AmFAR). San Francisco CA. Mar 14-17, 2000
11. Cu-Uvin S, Caliendo A, Ko H, Donahue S, Allega J, Kurpewski J, Carpenter CCJ, Mayer K, **Flanigan TP**. Long Term Patterns of Response to HAART: Plasma vs Genital Tract. (Abstract #N76e) 8th Conference on Retroviruses and Opportunistic Infections, Chicago IL. Feb 4-8, 2001
12. **Flanigan TP**, McKenzie M, Macalino G, Cu-Uvin S, Mitty J, Urbina B. The Feasibility of Directly Observed Therapy (DOT) Among HIV+ Substance Users: A Pilot Study. 1st International AIDS Society Conference on HIV Pathogenesis and Treatment, Buenos Aires, Argentina. Jul 8-11, 2001
13. Desai AA, Latta ET, Spaulding A, **Flanigan TP**. The Role of the State Correctional Facility in the Diagnosis of HIV in Rhode Island. HIV Prevention Conference, Centers for Disease Control, Atlanta GA. Aug 13-15, 2001.

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14. Mahajan A, **Flanigan TP**, Solomon S, et-al. Cost effective strategies to monitor HIV therapy in the developing world. Oral presentation. Sixth International Congress on AIDS in Asia and the Pacific. Melbourne, Australia. Oct 5-10, 2001
15. Kumarasamy N, Mayer K, Celantano D, **Flanigan T**, Thyagarajan SP, Solomon S. Prevalence of HBV, HCV among Persons with HIV and the Correlation with Plasma HIV-RNA Level - A Report from South India. Sixth International Congress on AIDS in Asia and the Pacific. Melbourne, Australia. Oct 5-10, 2001
16. Cu-Uvin S, Mitty J, Carpenter CCJ, Caliendo A, Stenzel M, Donahue S, Allega J, McKenzie M, Macalino G, Chapman T, **Flanigan T**. Effect of Daily Directly Observed Therapy (DOT) on Genital Tract and Plasma HIV-1 RNA in HIV-infected Substance Abusing Women: A Pilot Study. 39th Annual Meeting of the Infectious Diseases Society of America, San Francisco CA. Oct 25-28, 2001
17. Alt EN, Taylor EL, Tashima KT, Yates G, Costello T, Feller ER, **Flanigan TP**. Psychiatric Illness and Current Drug Use are Significant Barriers to Hepatitis C Treatment among HIV/HCV Co-Infected Individuals. (Abstract #35) Lifespan 9th Annual Research Celebration, Providence RI. Oct 2001
18. **Flanigan T**, Mahajan A, Kumarasamy N, Mayer K, Carpenter C, Solomon S. Total Lymphocyte Count (TLC) as a Surrogate for CD4 Count to Initiate and Monitor HAART in Resource-limited Settings. (Abstract #G160e) 9th Conference on Retroviruses and Opportunistic Infections, Seattle WA. Feb 24-28, 2002
19. Kumarasamy N, Mayer K, **Flanigan TP**, Hemalatha, Carpenter C, Thyagarajan, Solomon S. Survival of Persons with HIV Disease Following Antiretroviral Therapy in Southern India. (Abstract #G61e) 9th Conference on Retroviruses and Opportunistic Infections, Seattle WA. Feb 24-28, 2002
20. Kumarasamy N, Solomon S, **Flanigan T**, Hemalatha R, Thygarajan SP, Mayer K. Natural history of HIV disease in Southern India. (Abstract No: 01499) 10th International Congress on Infectious Diseases, Singapore. Mar 11-14, 2002
21. Taylor LE, Tashima KT, Yates G, Costello T, Alt EN, **Flanigan TP**. Drug Use is a significant barrier to HCV Treatment. 33rd Annual Medical-Scientific conference, American Society of Addiction Medicine, Atlanta GA. Apr 2002.
22. **Flanigan T**, Rich J, Tashima KT, Schwartzapfel B, Chapman S. An HIV/Hepatitis C Co-Infection Clinic: First Year. (Abstract #16A) Brown University Public Health Program Research Day, Providence RI. Apr 11, 2002
23. Alt E, Taylor LE, Tashima KT, Feller ER, Costello T, **Flanigan TP**. Addiction and Mental Illness are barriers to Hepatitis C Treatment among HIV/Hepatitis C Virus Coinfected Individuals. Brown University Department of Medicine 8th Annual Research Forum Poster Session, Providence RI. Jun 13, 2002
24. Kacanek D, Binson D, Sosman J, MacGowan R, Eldridge G, Fitzgerald C, Nealey J, **Flanigan T** and the Project START Study Group. Barriers to and Facilitators of HIV and STD Testing Among Young Incarcerated Men in the United States. XIV International AIDS Conference, Barcelona Spain. Jul 7-12, 2002
25. Kumarasamy N, Mayer K, Hemalatha R, **Flanigan T**, Yephthomi T, Thyagarajan SP, Solomon S. Antiretroviral therapy experience from Southern India. (Abstract No. B 10591) XIV AIDS Conference in Barcelona Spain. Jul 7-12, 2002
26. Taylor LE, Tashima KT, Alt E, Feller ER, Costello T, Costello T, **Flanigan TP**. Addiction and Mental Illness Are Barriers to Hepatitis C Treatment among HIV/Hepatitis C Virus Co-Infected Individuals. (ThPeC7513) XIV International AIDS Conference, Barcelona, Spain. Jul 7-12, 2002
27. Singh K, Mitty J, Macalino G, Chapman S, Macleod C, **Flanigan TP**. The tolerability of once daily regimens in a pilot program of directly observed therapy (DOT) for HIV. Presented at the 40th Annual Meeting of the Infectious Diseases Society of America, Chicago, IL. Oct 24-27, 2002
28. Kumarasamy N, Mayer KH, Balakrishnan P, Yephthomi T, Kalamalini A, Bavathy R, Bai APC, Murugavel KG, **Flanigan T**, Solomon S. Safety, Tolerability and Effectiveness of locally produced Generic Antiretroviral drugs in persons with HIV disease in Southern India. 6th International Congress on Drug Therapy in HIV infection, Glasgow, UK. Nov 17-21, 2002

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29. Mitty JA, Macalino G, Mock M, Macleod C, Sanford S, **Flanigan TP**. Challenges in the development of an HIV directly observed therapy (DOT) Program. Oral presentation at Elements of Success: An International conference on Adherence to Antiretroviral Therapy, Dallas TX. Dec 5-8, 2002
30. Macalino GE, Sanford-Colby S, Mitty J, **Flanigan TP**. Cost-effectiveness evaluation of a directly observed therapy (DOT) program for HIV antiretroviral medications: practical considerations. Oral presentation at Elements of Success: An International Conference on Adherence to Antiretroviral Therapy, Dallas TX. Dec 5-8, 2002
31. Mitty J, Macalino G, Loewenthal H, Sanford S, **Flanigan T**. Evaluating the potential use of HIV directly observed therapy (HIV/DOT) for incarcerated individuals being released from prison. Oral presentation at Elements of Success: An International Conference on Adherence to Antiretroviral Therapy, Dallas TX. Dec 5-8, 2002.
32. Sanford Colby S, Macalino GE, Mitty J, **Flanigan TP**. Evaluating a clinical trial to administer directly observed therapy (DOT) with HIV antiretrovirals. Oral presentation at Elements of Success: An International Conference on Adherence to Antiretroviral Therapy, Dallas TX. Dec 5-8, 2002
33. Kumarasamy, Chaguturu, Mahajan, Yepthomi, Balakrishnan, Kalamalini, **Flanigan T**, Solomon and Mayer K. Safety, Tolerability, and Effectiveness of Generic HAART Regimens in South India. (Abstract #174) Oral presentation. 10th Conference on Retroviruses and Opportunistic Infections, Boston MA. Feb 10-14, 2003.
34. Simmons E, Frierson G, **Flanigan T**. Barriers and Facilitators to HIV Testing in a Primary Care Setting. Oral presentation. National HIV Prevention Conference, Atlanta GA. Jul 27-30, 2003
35. Tashima KT, Alt EN, Harwell JI, Fiebich-Perez DK, **Flanigan TP**. Internet Sex-seeking Leads to Acute HIV Infection: A Report of Two Cases (Oral Presentation by Kojic EM.) STD/HIV Prevention on the Internet Conference, Washington DC. Aug 25-27, 2003
36. Macalino GE, Mitty JA, Bazerman LB, McKenzie M, **Flanigan TP**. Directly observed therapy (DOT) for the treatment of HIV seropositive substance users: Lessons learned from a pilot study. Presented at the American Public Health Association 131st Annual Meeting and Exposition, San Francisco CA. Nov 15-19, 2003.
37. Chaguturu S, Mitty J, MacLeod C, Urbina B, Pugatch D, **Flanigan T**. Directly observed therapy (DOT) for HIV treatment among adolescents: preliminary experience with two patients. Presented at the 2nd Annual Elements of Success: An International Conference on Adherence to Antiretroviral Therapy, Dallas TX. Dec 4-7, 2003
38. MacGowan R, Sosman J, Eldridge G, Moss S, Margolis A, **Flanigan T**, Gaydos C, & Project START Study Group. Sexually transmitted infections in men with a history of incarceration. (Abstract ThPeC7475) XV International AIDS Conference, Bangkok, Thailand. Jul 11-16, 2004
39. Saghyam S, Kumarasamy N, Solomon S, Cecelia AJ, **Flanigan T**, Mayer KH, Wanke C. Metabolic and body shape changes in a ART naïve cohort initiating generic HAART in South India. (Abstract 12327) XV International AIDS Conference, Bangkok, Thailand. Jul 11-16, 2004
40. Kumarasamy N, **Flanigan T**, Solomon S, Cecelia A, Balakrishnan P, Chaguturu S, Mayer KH. Rapid viral load suppression following generic HAART in Southern Indian HIV-infected patients. (Abstract 8686) XV International AIDS Conference, Bangkok, Thailand. Jul 11-16, 2004
41. Kumarasamy N, Solomon S, Cecilia A, Chaguturu S, Yepthomi T, **Flanigan T**, Balakrishnan P, Kalamalini A, Mayer KH. Impact of HAART on OIs and on survival of persons with HIV disease in Southern India. (Abstract) XV International AIDS Conference, Bangkok, Thailand. Jul 11-16, 2004
42. Lionel J, Buck J, Gopalakrishnan G, Cu-Uvin S, **Flanigan T**, Mayer K, Jasper P. HIV and obstetric complications and fetal outcomes in Vellore, India. (Abstract ThPeC7317) XV International AIDS Conference, Bangkok, Thailand. Jul 11-16, 2004
43. Hakim J, Charles M, **Flanigan T**, Gudza I, Boyle B. Difficulties in Providing Antiretroviral Medication to HIV-infected Healthcare Workers in Harare, Zimbabwe. XV International AIDS Conference, Bangkok, Thailand. Jul 11-16, 2004

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44. Cohen J, Lally M, Raz L, Beckwith C, Rich J, **Flanigan T**. Acceptability of Rapid HIV Testing at the Rhode Island Department of Corrections. 42nd Annual IDSA Meeting, Boston MA. Sep 30-Oct 3, 2004
45. Mitty JA, Macalino GE, Loewenthal HG, Bazerman LB, Sanford S, MacLeod CM, **Flanigan TP**. The Use of Modified Directly Observed Therapy (MDOT) among Hard-to-Reach Individuals Receiving Highly Active Antiretroviral Therapy (HAART). 42nd Annual IDSA Meeting, Boston, MA. Sep 30-Oct 3, 2004
46. Kumarasamy N, Saghyam S, Solomon S, Cecilia AJ, **Flanigan T**, Tokugha Y, Balakrishnan P, Mayer K. Toxicities and adverse events following Generic Highly Active Antiretroviral treatment in South Indian HIV-infected individuals. 7th International Conference on Drug Therapy in HIV Infection in Glasgow, Scotland. Nov 14-18, 2004
47. Kumarasamy N, Vallabhaneni S, Mayer KH, **Flanigan TP**, Carpenter CCJ, Solomon S. Randomized Control Trial of Structured Interrupted Generic Antiretroviral Therapy versus Continuous Generic HAART Patients in Southern India – Data from 12 Month Follow Up. 12th Conference on Retroviruses and Opportunistic Infections, Boston MA. Feb 22-25, 2005
48. Pachamuthu B, Solomon S, Janardhanan M, Kumarasamy N, Venkatakrishnan B, Reddy S, Liaquath A, Cecelia A, Kailasom G, Panchacharam T, Ramratnam B, Mayer KH, **Flanigan T**. A Simple, Low-cost CD4 Assay for Monitoring HIV-infected Individuals in Resource-limited Settings: An Evaluation of Guava EasyCD4 Assay. 12th Conference on Retroviruses and Opportunistic Infections, Boston MA. Feb 22-25, 2005
49. Atunah-Jay S, Washington E, Beckwith CG, **Flanigan T**. Routine HIV Testing & Care in the Correctional Setting: Inmate Experiences. Abstract ID 407. Oral presentation. 2005 National HIV Prevention Conference, Atlanta GA. Jun 12-15, 2005
50. Beckwith CG, Moreira CC, Aboshady H, Macalino G, Rich JD, **Flanigan TP**. 80% decrease in IDU-related New HIV diagnoses in Rhode Island. (Oral presentation #T3-B0304) 2005 National HIV Prevention Conference, Atlanta GA. Jun 12-15, 2005
51. Beckwith CG, Atunah-Jay S, Cohen J, Lally MA, Poshkus M, Rich JD, **Flanigan TP**. Feasibility and acceptability of Rapid HIV Testing in Jail. (#M2-F0702) 2005 National HIV Prevention Conference, Atlanta GA. Jun 12-15, 2005
52. Mitty JA, Macalino GE, Bazerman LB, Loewenthal HG, MacLeod CJ, **Flanigan TP**. Community-based modified directly observed therapy for HAART. Presented at the Treatment and Management of HIV Infection in the United States Conference, Atlanta GA. Sep 15-18, 2005
53. Simmons EM, **Flanigan TP**, Roberts M, Pugatch D, Tashima K, Eaton CB. Routine Rapid Testing for HIV in the Primary Care Setting (Poster). USHIV Conference, Atlanta GA. Sep 2005.
54. Mitty JA, Hogan JW, Macalino GE, DeLong AK, Bazerman LB, Loewenthal HG, **Flanigan TP**. A randomized controlled trial of MDOT vs. SOC among HIV+ active substance abusers. In: Program and abstract of the 42nd Annual Meeting of the IDSA, San Francisco CA. Oct 6-9, 2005
55. **Flanigan TP**, Bazerman LB, Loewenthal HG, Taylor LE, Mitty JA. Interventions for the Treatment of HIV, Hepatitis C, and other Infections among Substance Users. XIII World Congress on Psychiatry, in the mini-symposium, "Metabolic and Endocrine Disorders and Interventions in Drug Abusers Co-infected with HIV/HCV", Cairo, Egypt. Sep 10-15, 2005
56. Paul R, Tashima K, Tate D, Coop K, Valcour V, **Flanigan T**, and Carpenter C. CD4 count and risk of HIV-related cognitive dysfunction in the era of ART. (Abstract #353) 13th Conference on Retroviruses and Opportunistic Infections, Denver CO. Feb 5-8, 2006
57. Mitty JA, Mwamburi DM, Macalino GE, Caliendo A, Bazerman LB, **Flanigan TP**. Improved virologic outcomes and less HIV resistance for HAART-experienced substance users receiving Modified Directly Observed Therapy (MDOT): results from a randomized controlled trial. Presented at the 13th Annual Conference on Retroviruses and Opportunistic Infections, Denver CO. Feb 5-8, 2006
58. Wang B, Kumarasamy N, Divi N, Cecelia A, Mayer K, Lu Z, Wolf L, **Flanigan T**, Weinstein MC, Walensky RP, Freedberg KA, Losina E. Incidence of opportunistic infections (OIs) within specific CD4 strata in

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- HIV-infected patients in Southern India. (Abstract # WEPE0279) XVI International AIDS Conference, Toronto, Canada. Aug 13-18, 2006
59. Mwamburi M, Macalino G, Griffith J, Mitty JA, Wilson I, Neumann P, Wanke C, **Flanigan T**, Wong JB. Is immediate MDOT for HAART cost-effective compared to delaying MDOT for 3-month failures? Presented at the XVI International AIDS Conference, Toronto, Canada. Aug 13-18, 2006
 60. Kumarasamy N, Cecelia AJ, Yephthomi T, Devaleenal B, **Flanigan T**, Solomon S, Mayer K. AIDS defining illness (ADI) occurring after initiation of generic HAART in Southern India – Chennai HIV cohort study (CDB0223). XVI International AIDS Conference, Toronto, Canada. Aug 13-18, 2006
 61. Gaiter J, Want T, Zhang J, Reed B, Fitterling J, McCartney K, **Flanigan T**. Religious participation before incarceration is associated with decreased HIV risk among incarcerated men. (Abstract # WEPE0619) International AIDS Conference, Toronto, Canada. Aug 13-18, 2006
 62. Simmons EM, **Flanigan TP**, Roberts M, Pugatch D, Tashima KT, Eaton CB. Rapid Testing for HIV in the Primary Care Setting. North American Primary Care Research Group, Phoenix AZ. Oct 2006
 63. Tierney C, Gross R, Andrade A, Lalama C, Eshleman S, **Flanigan T**, Santana J, Dehlinger M, Flexner C, and the ACTG A5073 Study Team. Randomized Comparison in Treatment-Naïve Patients (Pts) of Once Daily (QD) vs. Twice Daily (BID) Lopinavir/Ritonavir (LPV/r)-Based Antiretroviral Therapy (ART) and Comparison of QD Self-Administered (SA) vs. Directly Observed Therapy (DOT) Presented at the 14th Conference on Retroviruses and Opportunistic Infections, Los Angeles CA. Feb 25-28, 2007
 64. Tate D, Paul R, Coop K, **Flanigan T**, Zhang S, Laidlaw D, Tashima K. Altered Diffusion Scalar Metrics in the Medsagittal Corpus Callosum are associated with Cognition among HIV Patients. (Oral Abstract #118) 14th Conference on Retroviruses and Opportunistic Infections (CROS), Los Angeles CA. Feb 25-28, 2007
 65. Mitty JA, Loewenthal HG, Huang D, Bazerman LB, Gardel M, **Flanigan TP**. Modified Directly Observed Therapy: Sustained self-reported adherence and HIV health Status. Presented at the 2nd International Conference on HIV Treatment Adherence, Jersey City NJ. Mar 3, 2007
 66. Bhaka N, Carter EJ, **Flanigan T**. Does Education at Point of Care Improve Patients Knowledge Regarding TB? Poster presentation at the 45th Annual Meeting of IDSA, Los Angeles CA. Oct 2007
 67. Tate DF, Conley J, Paul RH, Coop K, Bolden K, Laidlaw DH, Zhang S, Taylor L, **Flanigan T**, Tashima K. Hepatitis C Virus Co-Infection does not significantly worsen measures of Diffusivity in HIV Infected Patients; (Poster Presentation) 14th Annual Department of Medicine Research Forum Lecture & Poster Session Brown Campus, Providence RI. Jun 10, 2008
 68. **Flanigan TP**, ACTG Working Group members. Variation in Pre-Antiretroviral Therapy Plasma HIV-1 RNA Concentrations in Diverse Areas of the World. Poster presentation at the XVII International AIDS Conference, Mexico City, Mexico. Aug 7, 2008
 69. **Flanigan TP**, ACTG Working Group Members. A multinational study of didanosine-EC, emtricitabine and atazanavir vs co-formulated zidovudine/lamivudine and efavirenz for initial treatment of HIV-1 infection. Poster presentation at the XVII International AIDS Conference Mexico City, Mexico. Aug 7, 2008
 70. Rana AI, Gillani FS, Beckwith C, **Flanigan T**, Nash B. Pregnancies among HIV-infected women in Mississippi. Poster Abstract # H-453 presented at Infectious Diseases Society of America (IDSA) Annual Meeting, Washington, DC. Oct 25-28, 2008
 71. **Flanigan TB**, Kuester LB, Montague BT, Nijhawan AE, Nunn A. Potential beneficial impact of gonorrhea and Chlamydia testing on African Americans: Why are we not screening in Jails. CDC National HIV Prevention Conference, Atlanta GA. Aug 24, 2009
 72. Rana AI, Gillani FS, **Flanigan T**, Nash B, Beckwith CG. Predictors of follow-up care in Postpartum HIV-Infected Women in Mississippi. Oral presentation at the CDC National HIV Prevention Conference, Atlanta, GA. Aug 23-26, 2009
 73. Uhler L, Kumarasamy N, Mayer K, Saxena A, Losina E, Muniyandi M, Stoler A, Lu Z, Walensky RP, **Flanigan T**, Bender M, Freedberg KA, Swaminatham S. Cost-Effectiveness of HIV Testing Strategies

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- among Tuberculosis Patients in India. XVIII International AIDS Conference, Vienna Austria. Jul 18-23, 2010
74. **Flanigan TP**, Beckwith CG, Bazerman LB, Rich JD, Clermont M, Poshkus MT, Altice FL. A 44% and 69% Reduction in HIV in Connecticut and Rhode Island Correctional Facilities concurrent with Routine HIV Testing, Treatment and Linkage to Community Care. Abstract #7550. XVIII International AIDS Conference, Vienna, Austria. Jul 18-23, 2010
 75. Rana AI, Gilani FS, **Flanigan TP**, Kojic E. Need for more targeted STD testing in HIV Clinics in Rhode Island. Poster Abstract # 096 M. CDC National HIV Prevention Conference, Atlanta, GA. Aug 2011.
 76. Chan PA, Rana A, Parillo Z, Loberti PG, Chowdhury SP, Alexander N, Beckwith CG, Tashima KT, **Flanigan TP**, Kantor R. abstract # 071 M. High Rates of Primary HIV Infection among recently diagnosed Students from Rhode Island. CDC National HIV Prevention Conference, Atlanta GA. Aug 14-17, 2011
 77. Kumar N, Reece R, Norman B, Kwara A, **Flanigan T**, Rana A. HIV/AIDS treatment at tertiary hospital clinic in Ghana – Where are the Men? Poster presented at the International Association of AIDS Care Conference, Miami, FL. Jun 2013
 78. Reece R, Norman B, Kwara A, **Flanigan T**, Rana A. Retention to care of HIV positive postpartum females in Kumasi, Ghana. Poster presented at the 4th International HIV and Women’s Workshop, Washington, DC. Jan 2014
 79. Touzard Romo F, Smeaton LM, Campbell TB, Riviere C, Mngqibisa R, Supparatpinyo K, Kumwenda J, Kumarasamy N, Hakim JG, **Flanigan T**. Renal and Metabolic safety of initial HIV-1 therapy in resource-limited settings. Research Poster # 14-A-1471. CROI. Boston, MA. Mar 2014
 80. Dugdale C, Berk W, **Flanigan TP**. Routine inpatient HIV Screening: A Systematic review of existing models in the US and UK. Poster. May 12, 2014
 81. Fiorito T, Reece R, **Flanigan T**, Silverblatt F. Utility of *Borrelia Miyamotoi* Whole Blood PCR in Rhode Island; A case Series. Infectious Disease Society of America (IDSA), New Orleans, LA. Oct 2016
 82. Aldridge AM, Touzard Romo F, **Flanigan TP**. Acyclovir and Valacyclovir are less toxic than Ibuprofen or Acetaminophen: Why is neither available OTC to treat “Cold Sores”? Medical Student Poster Competition: American College of Physicians (ACP), Rhode Island Chapter. May 2017
 83. Brown K, Deatley T, Mensah G, Tucker N, **Flanigan T**, Romero MA. Stigma, Secrecy and Spirituality: An Exploratory Study of How Sociocultural Practices and Perceptions Influence Care Engagement among HIV-positive Adults in Akwatia, Ghana. Medical Student Poster Abstract #567. ID Week 2018, San Francisco, CA. Nov 26, 2018 published. Open Forum Infectious Diseases.

SCHOLARLY WORK PUBLISHED IN OTHER MEDIA

1. Mitty JA, Macalino G, Taylor L, Harwell JI, **Flanigan TP**. Directly Observed Therapy (DOT) for Individuals with HIV: Successes and Challenges. *Medscape General Medicine* 5(1), 2003. Website: www.Medscape.com/viewarticle/448428.
2. EnhanceLink – Culture of Correction – Webinar presenter, Sep 27, 2013
3. EnhanceLink – Jail Work – Webinar presenter, Oct 3, 2013
4. Chuck Weber – Press Interview. Aug 26, 2014
5. Georgia Public Radio Show called ‘On Second Thought’. Segment on Hiring Prison Doctors. Dec 18, 2014
4. Sirius XM Radio – Channel 81. Interview highlighting work in Liberia. Dec 9, 2014
5. Newport Mercury News shoot in Tiverton regarding Ebola Crisis. Jan 19, 2015
6. CNBC Power Lunch – TV Interview regarding the Zika Virus. Apr 12, 2016

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7. Recorded Radio Interview: Lyme Disease and other Tick-borne Illnesses, on B101 and Coast 93.3 in Providence RI. May 17, 2017

INVITED PRESENTATIONS

1. *Cryptosporidium* Infection: Clinical and Experimental Investigations. Hospital of the University of Pennsylvania, Division of Infectious Disease. 1990
2. Cryptosporidiosis: *In vitro* Infection with *Cryptosporidium* and Inhibition with New Agents. Massachusetts General Hospital, Division of Infectious Diseases, Boston MA. 1991
3. Comprehensive Care of HIV-Infected Prisoners in Rhode Island. PRIM&R, Boston MA. 1992
4. Cryptosporidiosis in HIV infection: protective immune responses. Tropical Medicine and Hygiene, Seattle Washington. 1993
5. Plenary Speaker and Co-Organizer, Opening Session. HIV Testing and Comprehensive Care of Incarcerated Men and Women: The Rhode Island Experience. First New England Conference on HIV Infection in Prisons. Wesleyan University, CT. 1994
6. Diarrhea in Patients with AIDS: Diagnosis and Management. National Conference on the Primary Care of HIV-Infected Persons. Sponsored by AmFAR. New York NY. Mar 1995
7. An Approach to Diarrhea and Pancreatitis. National Conference on the Primary Care of HIV-Infected Persons. Sponsored by AmFAR. New York NY. Feb 1996
8. Medical Grand Rounds. "Protease Inhibitors, Antiretroviral Meds and Combination Therapy for HIV." Bridgeport Hospital, Bridgeport CT. Dec 12, 1996
9. Medical Grand Rounds. "Update on HIV/AIDS." St. Luke's Hospital, New Bedford, MA. Sep 1996
10. Keynote speaker. "HIV in Prisons". Waldo-Knox Foundation Conference on Community Organizations and Correctional Facilities. Augusta ME. Sep 1996
11. Satellite Conference on STD/HIV Management in Prisons. Cambridge Studio of Massachusetts Corporation for Educational Telecommunications. Opportunistic Infections. Cambridge MA. Oct 24, 1996
12. Pre-conference Workshop, "Second Generation HIV/AIDS behind Bars." "Community Based Prevention, Education, and Case Management." 21st National Conference on Correctional Health Care, Nashville TN. Oct 27, 1996
13. American Medical Students' Association Regional Fall Workshop. Keynote speaker. "Medicine Behind Bars and Other Lessons from the AIDS Epidemic." Brown University, Providence RI. Nov 2, 1996
14. Mucosal Antibody and Sampling Techniques. HIVNET/AVEG Meeting. Falls Church VA. Nov 6-8, 1996
15. Management of the HIV-Infected Patient: A Practical Approach for the Primary Care Practitioner. Center for Bio-Medical Communication, Inc. and AmFAR. "Management of Gastrointestinal and Hepatic Diseases." New York NY. Mar 7, 1997
16. Flanigan TP, Milles J, Zack B. Effective Interventions for Incarcerated Populations. Workshop. HIV Prevention Community Planning Co-Chairs Meeting. CDC/NASTAD/NMAC. Mar 13-15, 1997
17. Moderator for workshop entitled, "Bridging the Gap between Incarceration and the Community: How to Provide Comprehensive Care, Preventive Services, and Case Management to Incarcerated Women After Release. National Conference on Women & HIV. Los Angeles CA. May 4-7, 1997
18. Keynote speaker. "HIVAIDS: The Search for a Cure". National Youth Leadership Forum. Boston MA. Jul 7, 1997.
19. Speaker, "Localized Mucosal Vaccines". HIV-1 Infection, Mucosal Immunity and Pathogenesis Conference, NIH. Bethesda MD. Sep 11-13, 1997
20. Flanigan TP, Hernandez E, Co-Chairs. HIV and Men: Risk Behaviors Among Population Groups II. 4th International Congress on AIDS in Asia and the Pacific. Manila, Philippines. Oct 25-29, 1997

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21. Flanigan TP, Spaulding A, Willis P. "Creating Comprehensive Medical HIV Treatment Programs: Cooperating with Community Services." 21st National Conference on Correctional Health Care San Antonio TX. Nov 10-12, 1997
22. Flanigan TP, Rich JD, Dickinson BP, ScB K, Vigilante KC, Adelson-Mitty J. A Review of Rhode Island 's Prison Care Program: Incarceration as a Unique Opportunity for HIV Diagnosis, Initiation of Comprehensive Care, and Linkage to Community Services." Invited oral presentation. 21st National Conference on Correctional Health Care San Antonio TX. Nov 10-12, 1997
23. Management of GI and Hepatic Diseases. Management of the HIV-Infected Patient: A Practical Approach for the Primary Care Practitioner. Center for Bio-Medical Communication Inc. and AmFAR. Mar 21, 1998
24. OI Prophylaxis in the Era of Potent Antiretroviral Therapy. Improving the Management of HIV Disease: An Advanced Course in HIV Pathogenesis, Antiretrovirals, and Other Selected Issues in HIV Disease Management. International AIDS Society-USA. Boston MA. Mar 28, 1998
25. Provider Practices: Prison Health. Committee on Perinatal Transmission of HIV. Workshop. National Academy of Sciences, Institute of Medicine. Washington DC. Apr 1, 1998
26. Diarrhea - The Gastrointestinal Manifestations of HIV Infection. Newport Marriott Hotel, Newport RI. Apr 24, 1998
27. Women to Women Video presented in Geneva, Switzerland and at the National Conference on Correctional Health Care, Long Beach, CA. Jul 1998
28. Guest Speaker, "Special Considerations for Using HAART in the Prison Setting". Management of HIV Infection in the Correctional Setting. A Videoconference Series Presented by the Division of Medicine - Albany Medical College and the New York State Department of Corrections. Albany NY. Sep 30, 1998
29. Speaker: Treatment of HIV in 1998: Are we winning the Battle? Internal Medicine Update. American College of Physicians/American Society of Internal Medicine. RI Chapter. Newport RI. Oct 6, 1998
30. The HIV Epidemic among Women. Gender and Reproductive Health: STDs and AIDS. Brown University Population Studies and Training Center. Providence RI. Feb 26, 1999
31. Management of Esophageal Disease, Diarrhea, Pancreatitis, and Biliary Disease in the HIV-Infected Patient. Management of the HIV-Infected Patient: A Practical Approach for the Primary Care Practitioner. Center for Bio-Medical Communication Inc. and AmFAR. Feb 27, 1999
32. Care of HIV among Women Behind Bars. Caring for Women with HIV Conference. Virginia Commonwealth University, Richmond VA. Mar 19, 1999
33. Clinical experience of Efavirenz. 5th Annual Meeting of the British HIV Association. Cambridge UK. Mar 26-28, 1999
34. AIDS service after prison: Rhode Island's continuity of care program", Moderator, "Integrating Public Health and Corrections: Preparing for the New Millennium." Chicago IL. Oct 3-5, 1999
35. Plenary Speaker, "Incarcerated Women". 1999 National Conference on Women and HIV/AIDS. Los Angeles CA. Oct 9-12, 1999
36. Keynote Speaker, "The AIDS Epidemic: Success in Translating "The Bench" to the Bedside". 7th Annual Research Celebration. Lifespan and Care New England. Providence RI. Nov 9-10, 1999
37. Invited presenter on Directly Observed Therapy. Conference: "Adherence to HIV Therapy: Building a Bridge to Success." Sponsors: Forum for Collaborative HIV Research and HRSA. Washington DC. Nov 15-16, 1999
38. Flanigan TP, Mermel L. Grand Rounds. Rhode Island Hospital. "Infectious Disease Update." Providence RI. Mar 14, 2000
39. Flanigan TP, Cu-Uvin S. "HIV/Legal Implications Now and in the Future". 23rd Annual 'Current Concepts in Fetal & Neonatal Care' Symposium. Sponsored by Women & Infants' Hospital, Providence RI. Apr 27, 2000
40. Alcohol induced Pancreatitis vs. Drug induced Pancreatitis (April 28). Alcohol Use and HIV Pharmacotherapy Conference. Natcher Conference Center, NIH, Bethesda MD. Apr 26-28, 2000

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41. Promoting the Successful Transition of HIV-Positive Inmates Back into the Community. CSAT, NIDA, & CDC Conference on Drug Use, HIV, and Hepatitis: Bringing it All Together. Baltimore MD. May 7-10, 2000
42. AIDS in the New Millennium. Grand Rounds. Newport Hospital. Newport RI. May 19, 2000
43. Grand Rounds. "Update on HIV treatment". St. Luke's Hospital. New Bedford MA. Apr 12, 2001
44. Infectious Disease HIV Case Studies. American College of Physicians/American Society of Internal Medicine. RI Chapter. Warwick RI. Apr 18, 2001
45. HIV Diagnosis, Care, and Prevention among Incarcerated Persons: A Missed Opportunity. HIV Issues among the Incarcerated. 2001 National HIV Prevention Conference. Atlanta GA. Aug 12-15, 2001
46. Flanigan TP, Cu-Uvin S. "Update on HIV". Grand Rounds. Women and Infants Hospital, Providence RI. Aug 16, 2001
47. Team Leader, Section on Cryptosporidiosis and Microsporidiosis, Section on Bacterial Infections for Opportunistic Infections Treatment Guidelines. Panel convened by the CDC and NIH. Bethesda, MD. Apr 15-16, 2002
48. Keynote speaker for Brown University Medical School Biomedical Research Day. "A tale of Two Epidemics: What we can learn from the TB and Syphilis epidemics to fight the HIV pandemic". Providence RI. Apr 22, 2002
49. A Tale of Two Epidemics: What we can learn from the TB and Syphilis epidemics to fight the HIV pandemic. Grand Rounds. Indiana State University Medical School, Indianapolis, IN. Oct 2, 2002
50. The Health Professional as Activist. Albert Schweitzer Symposium. UMASS Worcester Medical School, Worcester MA. Oct 8, 2002
51. HIV Management in the Youthful Offender. 9th Annual Meeting of the Society of Correctional Physicians. Nashville TN. Oct 20, 2002
52. A tale of Two Epidemics: What we can learn from the TB and Syphilis epidemics to fight the HIV pandemic. Grand Rounds. Case Western Reserve University, Cleveland OH. Oct 22, 2002
53. Chair, NIH/NIAID, CFAR, CDC sponsored workshop entitled: "A Working Group on the Use of Directly Observed Therapy and Other Community Based Efforts to get HAART to Those Who Aren't Getting It". Feb 9, 2003
54. Satellite Conference to 10th Conference on Retroviruses and Opportunistic Infections, Boston MA. Feb 10-14, 2003
55. Internal Medicine Update. Brown University Medical School. "A Tale of Two Epidemics," Providence RI. May 16, 2003
56. Rhode Island Academy of Family Physicians. "HIV Update", Mystic CT. May 16, 2003
57. Effectiveness Research on Antiretroviral Therapy in the Developing World- Setting an Agenda for Action, "ART in Southern India," Stony Point NY. May 17, 2003
58. Antiviral Regimen Special Topics. Bristol Myers Squibb Virology Phase IV Investigators Meeting, New York NY. Aug 23, 2003
59. Incarcerated Women's Health Meeting. DHHS. "HIV Infection in Incarcerated Women". Framingham MA. Sep 30, 2003.
60. Hepatitis C Infection and Substance Abuse. NIDA/NIH. "DOT: Lessons Learned from HIV Treatment," Washington DC. Nov 11-13, 2003
61. Invited Speaker at Symposium on Tropical Medicine and Infectious Diseases entitled, "Looking Back, Looking Forward". A Tribute to Benjamin H. Kean, MD. 1912-1993. New York NY. Oct 20, 2003
62. Grand Rounds. Brown Medical School. "Influenza in 2004!", Providence, RI. Jan 6, 2004.
63. Grand Rounds. Brown Medical School. "Occupational Transmission of HIV, Hepatitis B & C, and Prevention", Providence RI. Mar 30, 2004
64. Panelist, "The Pandemic and Treatments", and "The Evolution of HIV Care". Conference: Pandemic: Imaging AIDS. Watson Institute for International Studies, Brown University, Providence RI. Apr 24, 2004
65. Visiting Lecturer. Case Western Reserve University, Cleveland, Ohio. May 7, 2004

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66. Antiviral Treatment for HIV. Cancer Grand Rounds. Rhode Island Hospital, Providence RI. Jun 10, 2004
67. Toxicities of HAART and Management, and Adherence to HIV in Prison Populations. 1st National Conference of AIDS Society of India. New Delhi, India. Apr 2-4, 2005
68. Moderator, The IDSA affiliated Event: "Challenges in Addressing Infectious Diseases among Substance Users" a Round Table Discussion, IDSA, Boston MA. Sep 2004
69. Pharmacokinetics of ART drugs and HIV resistance & innovative approaches to therapy among substance users and the difficult patient. National Consultation on Drug Resistance in Malaria, Tuberculosis and HIV/AIDS, Mumbai, India. Sep 19-21, 2005
70. Flanigan TP, Altice F. "Meet the Professor": HIV in Corrections. 42nd Annual IDSA Meeting, San Francisco CA. Oct 6-9, 2005
71. Flanigan TP, Mitty JA. Round-Table Discussion on HIV testing in jails. Conference on Retroviruses and Opportunistic Infections (CROI), Denver CO. Feb 2-9, 2006
72. Linkage to Care to Treat the 'Failing' HIV-Infected Patient. NIMH/IAPAC International Conference on HIV Treatment Adherence, Jersey City NJ. Mar 8-10, 2006
73. Symposium on Pharmacotherapy of HIV Infection and Substance Abuse in Hispanic Populations. NIDA, NIH. "Community based interventions for HIV diagnosis, linkage to care, and adherence in Hispanic substance users." Scottsdale AZ. Sep 13-15, 2006
74. Invited member for technical consultation at the UNAIDS Expert Consultation on Behavior Change in the Prevention of Sexual Transmission of HIV, Geneva Switzerland. Sep 25-26, 2006
75. Testing Those at Highest Risk: What Works? Opportunities for Improving HIV Diagnosis, Prevention & Access to Care in the US, Washington DC. Nov 28-30, 2006
76. Reaching Out: Providing Mental Health Care for Persons Leaving Prison. Mental Health within Corrections. Morehouse/NIMH Invited Conference, Atlanta GA. Dec. 13-15, 2006
77. A Fire in Our House: The HIV Epidemic in America. Presented at the CFAR – Research-in-Progress Seminar, Lifespan-Brown University, Providence RI. Feb 16, 2007
78. HIV/AIDS Update presented at the World Youth Alliance Meeting, New York NY. Mar 29, 2007
79. A Fire in Our House: The Need for Community Based Intervention for HIV in America. Grand Rounds presentation at the 6th Annual George Naff Lecture, Cleveland OH. Apr 3-4, 2007
80. Visiting Professor, Case Western Reserve University School of Medicine, Cleveland Oh. Apr 3-4, 2007
81. HIV Testing Strategies for the Criminal Justice Population. Presented at the NIH/NIDA Annual Meeting on Drug Abuse and Risky Behaviors: The Evolving Dynamics of HIV and AIDS, Bethesda MD. May 9, 2007
82. Primary and Preventative Care of People with HIV. Presented at the American Conference for the Treatment of HIV (ACTHIV), Dallas TX. Jun 3, 2007
83. An Update on HIV and AIDS. Presented at Butler Hospital, BHSA Requirements Night Program. Providence RI. Jun 7, 2007
84. HIV Care and Research Update. Presented at the Lifespan Professional and Academic Affairs Committee, Providence RI. Jun 11, 2007
85. A Fire in Our House: Why We Need HIV & AIDS Community Based Research. Presented at the NIDA Tutorials Workshop, Quebec City, Canada. Jun 16, 2007
86. Meet the Professor Session: "HIV in Correctional Facilities". 45th IDSA Annual Meeting, San Diego CA. Oct 4-7, 2007
87. Incarcerated Populations – Prevention and Community Linkages. 2007 National HIV Prevention Conference, Atlanta GA. Dec 2-5, 2007
88. Visiting Professor, UMass Medical School, Worcester MA. Jan 21, 2008
89. Understanding the International AIDS Crisis. Presented at the World Youth Alliance Conference, Ottawa, Canada. Feb 1, 2008
90. Preparing for the International AIDS Conference. Presented at the World Youth Alliance Conference, Ottawa, Canada. Feb 2, 2008

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91. Infectious Diseases Update. Presented at The Miriam Hospital Board of Trustees Meeting, Providence RI Apr 22, 2008
92. Incarcerated Populations – Prevention and Community Linkages. Presented at Brigham & Women’s Hospital Grand Rounds, Boston MA. Jun 9, 2008
93. International HIV and the Global Epidemic. Presented to the World Youth Alliance Organization, New York, NY. Jul 14, 2008
94. HIV and Infectious Disease Care in Jails and Prisons: Scaling the Walls with the help of Academic Medicine. Presented at the 2008 Annual American Clinical and Climatological Association Meeting, Ponte Vedra FL. Oct 17, 2008
95. HIV in the Correctional Setting. Presented at the Gilead Health Policy Advisory Board fall 2008 Meeting, Washington DC. Nov 7, 2008
96. Flanigan TP, Lonks J, Mermel L. “Swine Flu Update” Presented at Hospital Wide Grand Rounds, Providence RI. May 12, 2009
97. Universal Precautions. Presented at the Rhode Island Chapter American College of Physicians 2009 Annual Scientific Meeting, Warwick RI. Jun 4, 2009
98. DOC Testing and Linkage to Care. Presented at the Gilead Medical Affairs Advisory Program on HIV, Washington DC. Jun 12, 2009
99. Infections in Prisoners. Presented at the Infectious Disease Society of American Annual Conference, Philadelphia PA. Oct 30, 2009
100. HIV Testing in Jails and Prisons: The Time is Now. Presented at the Institute of Medicine’s Workshop to Identify Facilitators and Barriers to HIV Testing, Washington DC. Apr 15, 2010
101. HIV Update: Treatment and Medication for Prison Population for the Adult Correctional Institution’s Health Care Grand Rounds, Providence RI. May 13, 2010
102. Routine HIV Testing in Medical Settings: The Time is Now and Linkage to Care for Criminal Justice Population: Scaling the Walls. Presented at the Annual Conference on HIV Among Women 2010, Providence RI. Jun 9, 2010
103. Ghana and Brown University Academic Partnership. Presented at the HED Regional Partners Meeting in Addis Ababa, Ethiopia. Feb 2012
104. HIV/AIDS a Person-Centered Response. Presented in Rome, Mar 2012
105. HIV/STD Ethics Session with Iris Tong at Brown Medical School, Apr 2012
106. HIV and Aging: Clinical Considerations as our Patients Live Longer. Present at Albany Medical College in Albany NY. Apr 2012
107. World Youth Alliance Seminar on Maternal Health, Youth Health and HIV/AIDS, New York, NY. May 2012
108. Global HIV Epidemic Lecture Series / RIH PDR, Providence RI. Jun 2012
109. CFAR – Impact of International Clinical Research / MGH-POTTS Conference in Boston MA. Jun 2012
110. HIV/AIDS a Person-Centered Response. Presented at the Courage Conference, Maryland. Jul 2012
111. HIV/AIDS a Person-Centered Response. Presented at the International AIDS Conference, Washington DC. Jul 2012
112. International Symposium, Excellence in Pediatrics HIV and TB Co-Infection Care convened as part of Brown University Ukraine collaboration to face the challenges of HIV among women and children. Convener. President’s Hotel, Kiev, Ukraine. Oct 2012
113. Acute HIV in Colleges. NECHA Speech in Dartmouth ME. Nov 2012
114. HED Roundtable Ghana / Brown partnership to address HIV/AIDS in Ghana. Nov 2012
115. The Adventure of Medicine, Second Look Program for Accepted Students, Brown University, May 3, 2013
116. Debate – Combating the spread of Ebola abroad, Brown University. Dec 3, 2014
117. Franciscan Missionary of St. Mary Talk with Sister Barbara, Fruit Hill, Providence on Ebola
118. Grant Rounds at RIH - Lessons Learned: Volunteering for 2 Months in Liberia to strengthen the Healthcare system in the Ebola Epidemic. Jan 6, 2015
119. Advances in Medicine Grand Rounds. Presented at Winthrop University Hospital, Mineola NY. Feb 2015

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120. St. Louis Abbey, talk with Father Gregory Mohrman in Jackson, Mississippi. Feb 2, 2015
121. Nurse Practitioner Alliance of RI (NPARI) with American Association of Nurses. Lessons Learned in Liberia and Tick- Borne Diseases. Keynote Speaker. Mar 7, 2015
122. NEAETC Faculty Development Program. Emerging Viral Diseases, Marriott Hotel, Providence RI. Mar 2015
123. Mini Conference on Ebola – Faculty member on panel, Brown University, Providence RI. Apr 2015
124. Micro ID, Brown University – Patient Presentation – Living with AIDS, Providence RI. Apr 2015
125. HIV and Other Health Risks associated with Men who have Sex with Men. Presented at the Courage Conference, Detroit MI. Aug 2015
126. Barrington Public Library. Participated in panel to evaluate Lyme disease and the different standards of care. Sep 30, 2015
127. The Ebola Epidemic and Liberia – Volunteering 8/31/14 to 10/31/14 - Atwood Lecture at Salve Regina. Feb 9, 2016
128. Second Look Speaker at Alpert Medical School, Brown University on Zika Virus. Apr 16, 2016
129. Global Health: Ebola in Liberia. Speaker at a conference at Memorial Hospital, Pawtucket RI. Apr 18, 2016
130. Lifespan Lyme Disease Center: Why, What and How? – Presented at the Pawtucket Country Club for Governors and Board Members invited by the Miriam Hospital Foundation, Board of Trustees, Pawtucket RI. Jun 23, 2016
131. Lyme and Other Tickborne Diseases: What Everyone Should Know. Health and Wellness Lecture Series, Rhode Island Hospital, Providence RI. May 23, 2017
132. Infectious Disease Epidemics. Lecture to the Primary Care and Population Medicine (PCPM) students. Brown University, Providence RI. Aug 1, 2017
133. HIV over the last 30 years – A journey of Hope, from prison to clinic. Summer Lecture Series presented by Dr. Philip Chan and The Do It Right Team, The Miriam Hospital, Providence RI. Aug 4, 2017
134. Understanding the Epidemiology of Lyme and other Tickborne Illnesses. Lifespan Community Health Institute, Providence RI. Aug 8, 2017
135. Lyme and other Tickborne Diseases: Challenges in Diagnosis, Treatment and Management. Presented at the Medical Forum during Family Weekend, Brown University, Providence, RI. Oct 14, 2017
136. Providing Medical and HIV care for men who have sex with men: Medical perspectives of an Infectious Disease Physician and Deacon, St. John Paul II Converging Roads, Houston, TX. Apr 21, 2018

CURRENT GRANTS

Emerging Infectious Disease Scholars at Brown University

Principal Investigator: Timothy P. Flanigan, MD

Agency: NIAID R25 AI140490

08/01/18 – 07/31/23

\$. Calendar Months

EIDS is a new program designed for students to develop the skills required to address the community-level, national, and global challenges of emerging infectious diseases facing us now and in the future.

COBRE Center on Opioids and Overdose / Special Populations Core

Core Co-Director: Timothy P. Flanigan, MD

Agency: NIH/NIGMS P20GM125507

09/01/18 - 08/31/23

\$. Calendar Months

Timothy P. Flanigan, M.D.

This Special Populations Core provides infrastructure to recruit and retain vulnerable and underserved individuals, builds capacity in the ethical conduct of research, and serves as a centralized resource for training and outreach regarding the conduct of research among individuals at risk for overdose and opioid-related harms.

University of Ghana-Brown University Academic Partnership to Address HIV/AIDS

Principal Investigator: Timothy P. Flanigan, MD

Agency: Higher Education for Development

Funding Period: Two Years

Two Year Total: \$1,100,000

HIV and Other Infectious Consequences of Substance Abuse

Principal Investigator : Timothy P. Flanigan, MD

Agency : NIH/NIDA 2T32DA13911

07/01/17 - 06/30/22

\$564,448 .6 Calendar Months

The goal of this training program is to prepare postdoctoral fellows (physicians and behavioral scientists) for research careers in the cross-disciplinary field of HIV and other infections associated with substance abuse

Providence / Boston Center for AIDS Research (CFAR)

Principal Investigator: Susan Cu-Uvin, MD

Agency: NIH 5P30AI42853

Core Faculty – Underrepresented minority faculty support. Program director.

07/01/18 - 06/30/23

Total amount: \$123,519 .9 Calendar Months

This is a multi-institutional Center for AIDS Research for which three of the five broad goals are directly relevant to the current grant, i.e., 1) To stimulate translational AIDS research with women, minorities and other underrepresented groups; 2) To integrate nutritional assessment/intervention and outcomes analysis into clinical research; and 3) To encourage multidisciplinary research on the clinical issues surrounding new therapies and the accompanying extended survival of HIV-seropositive patients.

Brown Initiative in HIV/AIDS Clinical Research for Minority Communities

Multiple Principal Investigator: Timothy P. Flanigan, MD

Agency: NIMH 1R25MH083620-01A1

07/01/08 – 06/30/20

Total Amount \$250,000/Year, 1.2 Calendar Months

The goal of this project is to promote the development of minority faculty in HIV/AIDS research.

PAST GRANT SUPPORT

Center for Metabolic Research on HIV and Drug Use

Principal Investigator: Sherwood Gorbach, MD

Agency: NIH/NIDA P30DA013868

09/01/00 – 07/31/14

\$25,929 1.2 Calendar Months

The goal of the Center is to continue to work to raise awareness of the importance of nutritional and metabolic disorders on outcomes in the drug using population and to encourage investigators to include studies of nutritional and metabolic status in their research in drug using populations.

Optimizing HIV Care in Less Developed Countries

Timothy P. Flanigan, M.D.

Principal Investigator: Kenneth Freedberg, MD

Agency: NIH/NIAID, 2R01A1058736

09/01/03 – 06/30/13

\$31,269 .6 Calendar Months

This new model will reflect the most current understanding of HIV and AIDS epidemiology, treatment efficacy, impact on TB transmission and cost-effectiveness of care.

Enhancing Linkages to HIV Primary Care and Services in Jail Settings: Demonstration Model

Special Projects of National Significance

Principal Investigator: Timothy P. Flanigan, MD

Agency: HRSA 1H97HA08535

09/01/07 - 08/31/12

Total amount: \$317,840, support: 1.8 Calendar Months

This project is an evaluation of enhancing linkages for HIV+ offenders to primary care and services beginning in jail settings and following into the community

Ethnic Health/Motivating HIV+ Latinos to Quit Smoking

Principal Investigator: Raymond Niaura, PhD

Agency: NIH/NIDA 1R01DA018079

08/05/05 - 07/31/10

Total amount: \$15,224 .12 Calendar Months

The goal is to improve the health and quality of life of HIV+ individuals and determine the most efficacious approaches to smoking cessation for diverse subpopulations of these patients.

Age Effects on HIV-associated Brain Dysfunction

Principal Investigator: Ronald Cohen, MD

Agency: NIH/NIMH

09/30/06 - 08/31/11

Total Amount \$22,212 .3 Calendar Months

The goal of this project is to achieve a greater understanding of factors that influence HIV effects in the brain and that contribute to changes that occur as HIV-infected patients' age.

Adult Therapeutic Clinical Trials Program for HIV/AIDS

Principal Investigator: Karen Tashima, MD

Agency: NIH U01 AI069472

12/01/06 - 11/30/13

Total amount: \$435,000 support: .24 Calendar Months

Objective: The goal of this project is to participate in multi-center HIV/AIDS therapeutic trials.

Modulation of *In-Vitro Cryptosporidium parvum* infection.

Agency: NIH-NIAID. KO8 AI 01085

PI: TP Flanigan, MD

Type: Laboratory research

10/01/91 – 09/30/94

Total amount: \$232,446

Fluconazole Prophylaxis of Mucosal Candidiasis

Agency: AmFAR

PI: TP Flanigan, MD

Type: Clinical trial

Timothy P. Flanigan, M.D.

05/01/92 – 04/31/93
Total amount: \$64,597

Induction of Anti-HIV IgA in Rectum and Cervix of Women.
PI: TP Flanigan, MD
Agency: NIH-NIAID. AI R01 35543-02.
11/01/93 - 11/01/97
Total amount: \$662,840.

Clinical Center for Viral Activation Transfusion Study.
PI: TP Flanigan, MD
Agency: NIH/NHLBI, Type: NO1-HB-57 117.
1994 - 1999

The major goal of this project is to determine the specific interactions between allogeneic blood transfusions in individuals with HIV infection and viral infection.

Antiviral Therapy and HIV in the Genital Tract of Women.
PI: Susan Cu-Uvin, MD
Agency: NIH, Type: R01-AO/HD R0350-01.
1997-current (second cycle)
This study evaluated the determinates of HIV-1 in the genital tract and the development of resistance.

HIV Vaccine Preparedness Study and Phase II Vaccine Trial.
PI: Kenneth Mayer, MD.
Agency: NIH/NIAID, Type: NO1-AI3517.
10/01/94 - 09/30/96
Total amount: \$214,298.
This is a multi-center HIV vaccine preparedness trial and Phase II HIV vaccine prevention trial.

Directly Observed HAART for Active Substance Abusers
PI: TP Flanigan
Agency: NIDA R01DA01367S1
07/01/00 - 08/31/04
Total Amount: \$2,500,000.
This study is designed and evaluated modified directly observed therapy of HIV treatment for active substance abusers.

HIV Teaching for Minority Primary Care Providers
Principal Investigator: Timothy P. Flanigan, MD
05/01/07 – 1 Year
Agency: Gilead
Total Amount: \$57,000 support
The goal for this project is to teach primary care providers from underserved areas the treatment of HIV and AIDS.

Optimizing HIV Care in Less Developed Countries
Principal Investigator: Kenneth Freedberg, MD
08/01/03 - 12/31/07
Agency: NIH/NIAID 1R01AI058736

Timothy P. Flanigan, M.D.

Total amount: \$24,952, .60 Calendar Months

The goal of this project is to examine the clinical impact, cost and cost-effectiveness of alternative HIV care strategies and expand efforts to three less developed countries.

Planning Grant for the Brown Institute for Clinical and Translational Science

Principal Investigator: Timothy P. Flanigan, MD

09/18/06 - 09/17/08

Agency: NIH/NCRR 1P20RR023509

Total amount: \$150,000, .3 Calendar Months

The goal of this grant is to establish a transformative institute incorporating the major biomedical centers in Rhode Island overcoming traditional institutional, departmental, disciplinary and organ system barriers that might otherwise impair the interactions of investigators with shared interests in clinical and translational research.

Age Effects on HIV-associated Brain Dysfunction

Principal Investigator: Ronald Cohen, MD

9/30/07 - 8/31/08

Agency: NIH/NIMH 1R01MH074368

Total amount: \$22,212/year, .30 Calendar Months

The goal of this project is to achieve greater understanding of factors that influence HIV effects in the brain, & that contribute to changes that occur as HIV-infected patients' age.

Center for Metabolic Research on HIV and Drug Use

Principal Investigator: Sherwood Gorbach, MD

07/01/02 - 03/31/13

Agency: NIDA 1P30DA013868

Total amount: \$58,060, 1.2 Calendar Months

The aim of this Center is to provide scientific resources for studying the nutritional, endocrine, and metabolic aspects of HIV infection in chronic drug users of different ethnicities (Caucasian, Hispanic, and African-Americans) who are using various types of illicit drugs.

Continuity of Care for Drug-Addicted Offenders in RI

Principal Investigator: Peter Friedmann, MD

09/01/03 - 08/31/08

Agency: NIDA 1U01DA016191

Total amount: \$27,145, Calendar Months: .30

The mission behind the Rhode Island Research Center to participate in NIDA's National Criminal Justice Drug Abuse Treatment Services Research System (CJ-DATS) is to improve the public safety, drug-related, public health, health and psychosocial outcomes of drug-involved offenders.

An Evaluation of Innovative Methods for Integrating Buprenorphine Opioid Abuse Treatment in HIV Primary Care Settings: Demonstration Model Site

Special Projects of National Significance

Principal Investigator: Timothy P. Flanigan, MD

Agency: HRSA. 1 H97HA03801

09/01/04 - 08/31/09

Total amount: \$300,000, support: 1.44 Calendar Months

This project is an evaluation of a demonstration site for innovative methods for integrating buprenorphine opioid abuse treatment in HIV primary care settings.

Timothy P. Flanigan, M.D.

REVIEWER FOR JOURNALS:

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|---------------------------------------|---|
| AIDS | AIDS and Behavior |
| AIDS Clinical Care | AIDS Reader |
| AIDS Patient Care & STDs | AIDS Res Hum Retroviruses |
| American Journal of Medicine | American Journal of Epidemiology |
| Annals of Internal Medicine | Arch Internal Medicine (aka JAMA) |
| Clinical Infectious Diseases | International Journal of Infectious Disease |
| International Journal of STD and AIDS | Journal of Corrective Health Care |
| Journal of Infectious Diseases | Journal of Substance Abuse |
| Journal of Women's Health (Larchmont) | Lancet Infectious Disease |
| Medicine & Health of Rhode Island | New England Journal of Medicine |
| PLoS One | Rhode Island Medicine |

UNIVERSITY TEACHING ROLES

- Cleveland Ohio AIDS Housing Council Board Member (President 1991). 1987-1991
- University Hospital of Cleveland Residency Education Committee. 1988-1991
- NIH AIDS Clinical Trials Group (ACTG) Enteric Pathogen Study Group. 1989-1991
- PLME Student Summer Research Project Preceptor per year. / 5 hours for 10 weeks. 1992 - present
- Pathophysiology 282 Special Session Organizer for 2nd Year Med Students to Meet Persons with AIDS (1 hour). 1994-present
- Biology of Emerging Microbial Diseases Lecturer – Bio 54. 1997
- Aided in the Development of the Patient-Oriented Problem-Solving System (POPS-ICLE) for the 1st-year medical students.
- Memorial Hospital or Rhode Island Residents and Student Preceptor. 2000
- HIV Prevention and its Manifestations in the Developing World Lecturer. UC107. 1996-present
- Cryptosporidiosis Lecturer for three one-hour lectures. Biomed 54. 1996-present.
- HIV Casebook Discussions Lecturer for Core Clinical Clerkship in Medicine. Biomed 301. 1997-present
- Scholarly Concentration of Global Health Organizer and Co-Director. 2006-present
- Community Based Teaching Program Preceptor. 2009-2010
- Evolution of HIV Epidemic in the Last 30 Years and Vulnerable Populations Lecturer at the School of Public Health. 2010 to present
- Biology of AIDS Lecture - Hope and Despair for Dr. Peter Shank's class yearly at Brown. 2017-present
- International Exchange Opportunities Presentation for 4th year Students (MHIRT) Health Disparities Course at the School of Public Health. 2015-present
- IPE Patient Panel on Living with HIV Presenter at the Alpert Medical School. 2015-present.

HOSPITAL TEACHING ROLES

- Internal Medicine Ward Attending. (1 ½ hrs per week x 4 weeks). 1992 - present.
- Clinical Manifestations of HIV/AIDS Lecturer at TMH. (3rd year med students/ 1 hour) during Medical Clerkship. 1992 - present.
- Medical Students Primary Preceptor (3rd Year Core Medical Rotation (3 hrs a week x 4 weeks). 1992 - 1994

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- Longitudinal Ambulatory for HIV-Infected Persons Preceptor (1 ½ days per week for 6 months) 1993-present
- Ambulatory Elective Preceptor for medical students for six-month longitudinal involving ambulatory care of HIV-infected persons' one-half day/week for six months. 1993-present. One half day/week x 6 months.
- Cryptosporidiosis & Opportunistic Infection Lecturer for Immunology Course. (course leader, Paul Knopf). (1 ½ hour lecture). 1993 - 1996.
- Primary Care Program Preceptor for ten weeks during the summer for medical students sponsored by the Rhode Island Department of Health. Two students/year. One afternoon/week x 10 weeks. 1994 - present.
- Lecturer, second year medical students in Infectious Disease. One-hour lecture. Pathophysiology section. 1995.
- Infectious Disease section, Pathophysiology / Small group leader. Second year medical students. Six sessions per year. Three-hour session. 1992 - present.
- The Miriam Hospital, Rhode Island Hospital, and the VA Hospital, Noon lectures and Grand Rounds every 1-3 years.
- Patient Based Learning (PBL) Lecturer at TMH for 3rd year Clerkship Medical Students (Quarterly) 2010-present
- Lyme and Tickborne Diseases Clinic Preceptor for 3rd Year Med Student Rotation (Friday's). 2017-present

PHYSICIAN MENTOR:

Physician Mentor, Doctoring Course Year 1, Hildred Sarah Rochon, Fall 2009

Physician Mentor, HIVMA Minority Clinical Fellowship Awardee, Carolina Abuelo, Fall 2009.

MHIRT Mentor: Forty plus students from Brown University from 2014 to 2018 through the Minority Health International Research Training (MHIRT) Program

T-32 MENTOR FOR THE FOLLOWING:

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| 2001-2003 | Payne, Nanetta, PhD. Jackson State University, Assistant Professor of Psychology, Jackson State University, Associate Director of Research, Mississippi Urban Research Center. HIV Testing among African-Americans. Post- and Junior Faculty |
| 2001-2003 | Simmons, Emma, MD. Brown University. HIV testing and primary care. Assistant Professor of Family Medicine. Post-doctoral and Junior Faculty |
| 2001-2003 | Cristofaro, Pat, MD. Boston University. HIV, Drug Abuse and Sepsis. Clinical Assistant Professor, Brown University. Post-doctoral |
| 2001-2004 | Lurie, Mark, PhD. Johns Hopkins. Impact of Antiretroviral Therapy on HIV Epidemic Dynamics. Assistant Professor, Brown University. Post-doctoral and Junior Faculty |
| 2002-2004 | Crocket, Kathy, MED. Mississippi State University. HIV in the Africa American Community. Pre-doctoral Fellow |
| 2002-2004 | Poshkus, Mike, MD. Columbia University. HIV in the international setting. Clinical Assistant Professor, Brown University. Post-doctoral |
| 2003-2005 | Moore, Shannon, BS. Belhaven College. High Risk Behavior among HIV and African Americans. Dissertation not completed. Pre-doctoral |
| 2003-2005 | Martin, Troy, MD. University of Washington. HIV Pathogenesis. Clinical Private Practice in Washington State. Post-doctoral |
| 2004-2006 | Ratcliff, Tanya, MA. Clark Atlanta University. HIV and Substance abuse among Adolescents. Pre-doctoral Fellow |

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2005-2007 **Davis, Teri, MA.** University of Minnesota. HIV and Substance abuse among displaced populations. Pre-doctoral Fellow

2005-2007 **Haverkamp, Mariam, MD.** Medizinische Hannover. HIV and substance abuse in the international setting. Infectious Disease Specialist, Division of Global Health at Massachusetts General. Post-doctoral

2005-2007 **Beckwith, Curt, MD.** Alpert Medical School of Brown University. HIV and substance abuse in the correctional setting. Assistant Professor of Medicine, Brown University. Post-doctoral and Junior Faculty. K23

2005-2008 **Bonney, Loida E.** HIV testing among under-represented communities. Post-doctoral.

2006-2008 **Tillis, Crystal, BS.** Southern University. HIV risk factors among pregnant women. Doctoral Student. Pre-doctoral

2006-2008 **Zeller, Kimberly A.** HIV among underserved women. Post-doctoral

2007-2009 **Evans, Shenell, BS.** Jackson State University. HIV, substance abuse and PTSD. Doctoral Student

2007-2009 **Nijhawan, Ank, MD.** University of Texas SW Medical. Instructor of Medicine. HIV in the correctional setting. Post-doctoral fellow

2008-2010 **Nunn, Amy, ScD.** Harvard. HIV and alcohol abuse among underserved populations. Assistant Professor of Medicine (Res), Brown University Developmental Grant, RI Foundation. Post-doctoral and Junior Faculty

2008-2009 **Montague, Brian, DO.** University of North Texas Health Sciences, Texas College of Osteopathic Medicine. Assistant Professor of Medicine, Brown University. HIV and Hepatitis Co-infection. Post-doctoral and Junior Faculty

2008-2010 **Harness, Shannae, BS.** Louisiana State University. Doctoral Student. HIV, substance abuse among Minority, Adolescent populations. Pre-doctoral

2008-2010 **Pinkston, Megan, PhD.** University of Kansas. NIH T32 Grant. HIV and substance abuse (cocaine) and mental health. Assistant Professor, Alpert Medical School of Brown University.

2009-2010 **Rana, Aadia, MD.** University of Alabama in Birmingham. Assistant Professor of Medicine, Alpert Medical School of Brown University. HIV Care Continuum among HIV and postpartum women. Post-doctoral

2009-2011 **Temple, Brian, MD.** Ross School of Medicine. HIV/TB I the international community. Assistant Professor, Texas Tech University Health Sciences Center Medical School.

2009-2011 **Borne, Meghan, BS.** Southern University A&M College. Doctoral Student. (Not yet decided). Pre-doctoral

2009-2011 **Gardner, Adrian, MD.** Alpert Medical School of Brown University. NIH T32 Grant. HIV/TB in corrections (international). Medical Director IU-Kenya Program.

2010-2011 **Winston, Susanna E, MD.** University of Minnesota. Pediatric Practice, Rhode Island. Pediatric HIV in Resource Limited Settings. Post-doctoral

2010-2012 **Zachary, Dalila A, MD.** Johns Hopkins School of Medicine. Physician, University Teaching Hospital, Lusaka, Zambia. HIV in Resource Limited Settings. Post-doctoral

2011-2013 **Tavares, Jose, MD.** University of Coimbra. Federal University of Sao Paulo. Physician at Cape Cod Hospital. HIV/TB in Cape Verde and the international community. Post-doctoral

2011-2013 **Simons, Dantrell, MA.** Argosy University. Public Health Advisor – Health IT at SAMHSA. HIV / Substance abuse among African American Men. Pre-doctoral fellow.

2011-2015 **Touzard Romo, Francine, MD.** University of Panama. HIV and Hepatitis C. HIV and Substance abuse in Hispanic communities. Post-doctoral

2011-2017 **Ruark, Allison, MA.** Oregon State University. Free Lance Research in Kampala, Uganda. HIV/Substance abuse in resource limited settings. Pre-doctoral

2012-2014 **Nixon, Christina E.** HIV and parasitic co-infections in Sub-Saharan Africa. Post-doctoral

2012-2014 **Parker, Sharon, MD.** University of North Carolina. Intimate partner violence and HIV among minority communities. Post-doctoral

Timothy P. Flanigan, M.D.

2012-2014 **MacCarthy, Sharon, PhD.** Harvard School of Public Health. Associate Policy Researcher, RAND. HIV and Substance abuse among women. Post or Pre-doc

2012-2014 **Atunah-Jay, Sarah, MD.** Warren Alpert School of Medicine at Brown University. Private Practice, Minnesota. HIV/Substance Abuse and PMTCT in Resource limited settings. Post or Pre-doc

2013-2015 **Janvier, Marjorie, MD.** Tufts School of Medicine. Health Barriers to Care for HIV+ and Substance Abusers. Beth Israel Deaconess Medical Center, The Dimock Center. Post or Pre-doc

2013-2015 **Reece, Rebecca M, MD.** West Virginia School of Medicine. Associate Professor of Medicine, Alpert Medical School of Brown University. Access to ART for HIV+ and HIV care continuum among HIV positive women. Post-doctoral

2013-2015 **Sakyi, Kwame, MPD.** Johns Hopkins. T32 Grant. ART Adherence in Resource Limited Settings.

2014-2015 **Monteiro, Filipe Jose, MD.** Post-doctoral fellow.

2014-2016 **Aibana, Omowunmi, MD,** University of Pennsylvania. T32 Grant. HIV and Substance Abuse in Resource Limited Settings. Post-doctoral

2015-2016 **Carroll, Jennifer, MD.** HIV among opioid addicted individuals. Post-doctoral.

2015-2017 **Chiang, Silvia, MD.** Ukraine Project

COMMUNITY MENTORING / FACULTY SPONSORING FOR BROWN UNIVERSITY:

2009-2012 **Yang, Irene.** - Categorical Medical Intern / Resident Advisor

2015 **Le, Christine T.** - Dir Research / Independent Study

2015-2016 **Aucapina, Christin J.** - Honors Thesis Preparation

2015-2016 **Medina, Martha M.** - Honors Thesis Preparation

2015-2016 **Milano Gina** - Independent Study in Science & Society

2016 **Galvan, Lauren** - Spiritual Battles; A Catholic Prospective

2016 **Yeh, Emily I.** - Spiritual Battles; A Catholic Prospective

2016 **Remland, Joshua** - Honors Thesis - Second Reader

2016 **Delamerced, Anna** - MC-ScM Candidate, Community Mentor

2017-2019 **Brown, Kelsey** - Sponsorship and Independent Study Project

2017 **Vasant, Allie Irene** - HIV in Rhode Island

2017 **McDonald, Jessica** - Hepatitis C Infections

2018 **Aldridge, Alyssa** - Treatment of HSV infection

2018-2020 **McCarthy, Meghan** - Lyme and Tickborne Diseases

2018-2019 **Dunham, Katherine** - Hepatitis C Infections

2018 **Oring, Shir** - Community Mentor Match

EXHIBIT B
TO DECLARATION OF
TIMOTHY P. FLANIGAN, MD
(EXHIBIT 4)

Coronavirus Disease 2019 (COVID-19)

[MENU >](#)

The Importance of Reopening America's Schools this Fall

Importance of Reopening Schools

Updated July 23, 2020

[Print](#)

As families and policymakers make decisions about their children returning to school, it is important to consider the full spectrum of benefits and risks of both in-person and virtual learning options. Parents are understandably concerned about the safety of their children at school in the wake of COVID-19. The best available evidence indicates if children become infected, they are far less likely to suffer severe symptoms.^{[1],[2],[3]} Death rates among school-aged children are much lower than among adults. At the same time, the harms attributed to closed schools on the social, emotional, and behavioral health, economic well-being, and academic achievement of children, in both the short- and long-term, are well-known and significant. Further, the lack of in-person educational options disproportionately harms low-income and minority children and those living with disabilities. These students are far less likely to have access to private instruction and care and far more likely to rely on key school-supported resources like food programs, special education services, counseling, and after-school programs to meet basic developmental needs.^[4]

Aside from a child's home, no other setting has more influence on a child's health and well-being than their school. The in-person school environment does the following:

- provides educational instruction;
- supports the development of social and emotional skills;
- creates a safe environment for learning;
- addresses nutritional needs; and
- facilitates physical activity.

This paper discusses each of these critical functions, following a brief summary of current studies regarding COVID-19 and children.

COVID-19 and Children

The best available evidence indicates that COVID-19 poses relatively low risks to school-aged children. Children appear to be at lower risk for contracting COVID-19 compared to adults. To put this in perspective, according to the Centers for Disease Control and Prevention (CDC), as of July 17, 2020, the United States reported that children and adolescents under 18 years old account for under 7 percent of COVID-19 cases and less than 0.1 percent of COVID-19-related deaths.^[5] Although relatively rare, flu-related deaths in children occur every year. From 2004-2005 to 2018-2019, flu-related deaths in children reported to CDC during regular flu seasons ranged from 37 to 187 deaths. During the H1N1 pandemic (April 15, 2009 to October 2, 2010), 358 pediatric deaths were reported to CDC. So far in this pandemic, deaths of children are less than in each of the last five flu seasons, with only 64.[†] Additionally, some children with certain underlying medical conditions, however, are at increased risk of severe illness from COVID-19.*

Scientific studies suggest that COVID-19 transmission among children in schools may be low. International studies that have assessed how readily COVID-19 spreads in schools also reveal low rates of transmission when community transmission is low. Based on current data, the rate of infection among younger school children, and from students to teachers, has been low, especially if proper precautions are followed. There have also been few reports of children being the primary source of COVID-19 transmission among family members.^{[6],[7],[8]} This is consistent with data from both virus and antibody testing, suggesting that children are not the primary drivers of COVID-19 spread in schools or in the community.^{[9],[10],[11]} No studies are conclusive, but the available evidence provides reason to believe that in-person schooling is in the best interest of students, particularly in the context of appropriate mitigation measures similar to those implemented at essential workplaces.

Educational Instruction

Extended school closure is harmful to children. It can lead to severe learning loss, and the need for in-person instruction is particularly important for students with heightened behavioral needs.^{[12],[13]} Following the wave of school closures in March 2020 due to COVID-19, academic learning slowed for most children and stopped for some. A survey of 477 school districts by the University of Washington's Center on Reinventing Public Education found that, "far too many schools are leaving learning to chance."^[13] Just one in three school districts expected teachers to provide instruction, track student engagement, or monitor academic progress for all students, and wealthy school districts were twice as likely to have such expectations compared to low-income districts.^[13]

We also know that, for many students, long breaks from in-person education are harmful to student learning. For example, the effects of summer breaks from in-person schooling on academic progress, known as "summer slide," are also well-documented in the literature. According to the Northwest Evaluation Association, in the summer following third grade, students lose nearly 20 percent of their school-year gains in reading and 27 percent of their school-year gains in math.^[14] By the summer after seventh grade, students lose on average 39 percent of their school-year gains in reading and 50 percent of their school-year gains in math.^[14] This indicates that learning losses are large and become even more severe as a student progresses through school. The prospect of losing several months of schooling, compared to the few weeks of summer vacation, due to school closure likely only makes the learning loss even more severe.

Disparities in educational outcomes caused by school closures are a particular concern for low-income and minority students and students with disabilities. Many low-income families do not have the capacity to facilitate distance learning (e.g. limited or no computer access, limited or no internet access), and may have to rely on school-based services that support their child's academic success. A study by researchers at Brown and Harvard Universities assessed how 800,000 students used Zearn, an online math program, both before and after schools closed in March 2020.^[15] Data showed that through late April, student progress in math decreased by about half, with the negative impact more pronounced in low-income zip codes.^[15] Persistent achievement gaps that already existed before COVID-19, such as disparities across income levels and races, can worsen and cause serious, hard-to-repair damage to children's education outcomes.^{[15],[16]} Finally, remote learning makes absorbing information more difficult for students with disabilities, developmental delays, or other cognitive disabilities. In particular, students who are deaf, hard of hearing, have low vision, are blind, or have other learning disorders (e.g., attention deficit hyperactivity disorder (ADHD)) and other physical and mental disabilities have had significant difficulties with remote learning.^[17]

Social and Emotional Skill Development

Schools play a critical role in supporting the whole child, not just their academic achievement. In addition to a structure for learning, schools provide a stable and secure environment for developing social skills and peer relationships. Social interaction at school among children in grades PK-12 is particularly important for the development of language, communication, social, emotional, and interpersonal skills.^[18]

Extended school closures are harmful to children's development of social and emotional skills. Important social interactions that facilitate the development of critical social and emotional skills are greatly curtailed or limited when students are not physically in school. In an in-person school environment, children more easily learn how to develop and maintain friendships, how to behave in groups, and how to interact and form relationships with people outside of their family. In school, students are also able to access support systems needed to recognize and manage emotions, set and achieve positive goals, appreciate others' perspectives, and make responsible decisions. This helps reinforce children's feelings of school connectedness, or their belief that teachers and other adults at school care about them and their well-being. Such routine in-person contacts provide opportunities to facilitate social-emotional development that are difficult, if not impossible, to replicate through distance learning.^{[18],[19],[20]}

Additionally, extended closures can be harmful to children's mental health and can increase the likelihood that children engage in unhealthy behaviors. An environment where students feel safe and connected, such as a school, is associated with lower levels of depression, thoughts about suicide, social anxiety, and sexual activity, as well as higher levels of self-esteem and more adaptive use of free time.^{[19],[20]} A longitudinal study of 476 adolescents over 3 years starting in the 6th grade found school connectedness to be especially protective for those who had lower connectedness in other areas of their lives, such as home, and to reduce their likelihood of substance use.^[20]

Further, a review of studies conducted on pandemics found a strong association between length of quarantine and Post Traumatic Stress Disorder symptoms, avoidance behavior, and anger. Another review published this year found that post-traumatic stress scores of children and parents in quarantine were four times higher than those not quarantined.^{[21],[22]}

In-person schooling provides children with access to a variety of mental health and social services, including speech language therapy, and physical or occupational therapy to help the physical, psychological, and academic well-being of the child.^{[23],[24],[25],[26]} Further, school counselors are trained in the mental health needs of children and youth and can recognize signs of trauma that primary caregivers are less able to see because they themselves are experiencing the same family stresses. School counselors can then coordinate with teachers to implement interventions to offer children a reassuring environment for regaining the sense of order, security, and normalcy.

Without in-person schooling, many children can lose access to these important services. For example, we know that, even outside the context of school closures, children often do not receive the mental health treatment they need. Among children ages 9-17, it is estimated that 21 percent, or more than 14 million children, experience some type of mental health condition.^[27] Yet only 16 percent of those with a condition receive any treatment.^[23] Of those, 70-80 percent received such care in a school setting.^[23] School closures can be particularly damaging for the 7.4 million American children suffering from a serious emotional disturbance. For those individuals who have a diagnosable mental, behavioral or emotional condition that substantially interferes with or limits their social functioning, schools play an integral role in linking them to care and necessary support services.

For children with intellectual or physical disabilities, nearly all therapies and services are received through schools. These vital services are difficult to provide through distance learning models. As a result, more children with disabilities have received few to no services while schools have been closed.

Safety

Extended school closures deprive children who live in unsafe homes and neighborhoods of an important layer of protection from neglect as well as physical, sexual, and emotional maltreatment and abuse. A 2018 Department of Health and Human Services report found that teachers and other educational staff were responsible for more than one-fifth of all reported child abuse cases—more than any other category of reporter.^[28] During the COVID-19 school closures, however, there has been a sharp decline in reports of suspected maltreatment, but tragically a notable increase in evidence of abuse when children are seen for services. For example, the Washington, D.C. Child and Family Services Agency recorded a 62 percent decrease in child abuse reporting calls between mid-March and April 2020 compared to the same time period in 2019, but saw more severe presentation of child abuse cases in emergency rooms.^[29] Children who live in a home or neighborhood where neglect, violence, or abuse occur, but who are not physically in school, are deprived of access to trained school professionals who can readily identify the signs of trauma and provide needed support and guidance.^{[30],[31],[32],[33],[34]}

Nutrition

Extended school closures can be harmful to the nutritional health of children. Schools are essential to meeting the nutritional needs of children with many consuming up to half their daily calories at school. Nationwide more than 30 million children participate in the National School Lunch Program and nearly 15 million participate in the School Breakfast Program.^{[35],[36]} For children from low-income families, school meals are an especially critical source of affordable, healthy foods. While schools have implemented strategies to continue meal services throughout periods of school closures, it is difficult to maintain this type of school nutrition program over the long-term. This is a particularly severe problem for the estimated 11 million food-insecure children, living in the United States.

Physical Activity

When schools are closed, children lose access to important opportunities for physical activity. Many children may not be sufficiently physically active outside of the context of in-school physical education (PE) and other school-based activities. Beyond PE, with schools closed, children may not have sufficient opportunities to participate in organized and safe physical activity. They also lose access to other school-based physical activities, including recess, classroom engagements, and after school programs.

The loss of opportunities for physical activity from school closures, especially when coupled with potentially diminished nutrition, can be particularly harmful to children. Physical inactivity and poor nutrition among children are major risk factors

for childhood obesity and other chronic health conditions. Over 75 percent of children and adolescents in the United States do not meet the daily physical activity level recommendations (60 minutes or more), and nearly half exceed 2 hours per day in sedentary behavior. Current models estimate that childhood obesity rate may increase by 2.4 percent if school closures continue to December 2020.^{[37],[38],[39]}



Conclusion

Schools are an important part of the infrastructure of our communities, as they provide safe, supportive learning environments for students, employ teachers and other staff, and enable parents, guardians, and caregivers to work. Schools also provide critical services that help meet the needs of children and families, especially those who are disadvantaged, through supporting the development of social and emotional skills, creating a safe environment for learning, identifying and addressing neglect and abuse, fulfilling nutritional needs, and facilitating physical activity. School closure disrupts the delivery of in-person instruction and critical services to children and families, which has negative individual and societal ramifications. The best available evidence from countries that have opened schools indicates that COVID-19 poses low risks to school-aged children, at least in areas with low community transmission, and suggests that children are unlikely to be major drivers of the spread of the virus. Reopening schools creates opportunity to invest in the education, well-being, and future of one of America's greatest assets—our children—while taking every precaution to protect students, teachers, staff and all their families.













*Some children have developed multisystem inflammatory syndrome (MIS-C) after exposure to SARS-CoV-2 (the virus that causes COVID-19). (<https://www.cdc.gov/mis-c/cases/index.html>) In one targeted surveillance study for MIS-C associated with SARS-CoV-2, however, the majority of children who were hospitalized with COVID-related MIS-C (70 percent) had recovered by the end date of the study period. (Feldstein LR et al. Multisystem Inflammatory Syndrome in US Children and Adolescents. *N Engl J Med*. 2020;10.1056/NEJMoa2021680)


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Last Updated July 23, 2020

EXHIBIT 7
TO DECLARATION OF
TIMOTHY P. FLANIGAN, MD
(EXHIBIT 4)



Coronavirus Disease 2019 (COVID-19)

[MENU >](#)

Preparing K-12 School Administrators for a Safe Return to School in Fall 2020

Preparing for a Safe Return to School

Updated Aug. 26, 2020

[Print](#)

Schools are an important part of the infrastructure of communities and play a critical role in supporting the whole child, not just their academic achievement.

This guidance is intended to aid school administrators as they consider how to protect the health, safety, and wellbeing of students, teachers, other school staff, their families, and communities and prepare for educating students this fall.

This guidance is for K-12 school administrators who are preparing for students, teachers, and staff to return to school in fall 2020. School administrators are individuals who oversee the daily operations of K-12 schools, and may include school district superintendents, school principals, and assistant principals.

It is critical that all administrators:

- Engage and encourage everyone in the school and the community to practice preventive behaviors. These are the most important actions that will support schools' safe reopening and will help them stay open.
- Implement multiple SARS-CoV-2 mitigation strategies (e.g., social distancing, masks, hand hygiene, and use of [cohorting](#)).
- **Communicate, educate, and reinforce** appropriate hygiene and social distancing practices in ways that are developmentally appropriate for students, teachers, and staff.
- Integrate SARS-CoV-2 mitigation strategies into co-curricular and extracurricular activities (e.g., limiting or cancelling participation in activities where social distancing is not feasible).
- Maintain healthy environments (e.g., cleaning and disinfecting frequently touched surfaces).
- Make decisions that take into account the level of community transmission.
- Repurpose unused or underutilized school (or community) spaces to increase classroom space and facilitate social distancing, including outside spaces, where feasible.
- Develop a proactive plan for when a student or staff member tests positive for COVID-19.
- Develop a plan with state and local health department to conduct case tracing in the event of a positive case.
- Educate parents and caregivers on the importance of monitoring for and responding to the symptoms of COVID-19 at home.
- Develop ongoing channels of communication with state and local health departments to stay updated on COVID-19 transmission and response in your local area.

The guidance described in this document is based on the best available evidence at this time. This guidance is meant to supplement—not replace—any state, local, territorial, or tribal health and safety laws, rules, and regulations with which schools must comply.

Key considerations for school administrators

- COVID-19 transmission rates in the immediate community and in the communities in which students, teachers, and staff live

- Approaches to cohorting that fit the needs of your school/district and community (e.g., keeping students in class pods, staggering when students return to school facility, having the same teacher stay with the same group of students)
 - Can unused or underutilized school spaces, including outdoor spaces, be repurposed to increase classroom space and facilitate social distancing?
- Concurrently implementing multiple strategies in school to prevent the spread of COVID-19 (e.g., social distancing, masks, hand hygiene, and use of cohorting)
- Best practices for your school and community to communicate, educate, and reinforce personal protective behaviors to prevent the spread of COVID-19 in school and in the community
- Integrating strategies to reduce COVID-19 transmission into co-curricular and extracurricular activities (e.g., limiting participation in activities where social distancing is not feasible)
- Planning and preparing for when someone gets sick
- Working with state and local health authorities to develop a plan to conduct contact tracing in the event of a positive case
- Communicating appropriately to families about home-based symptom screening

Critical role of schools

This guidance is intended, first and foremost, to protect the health, safety and wellbeing of students, teachers, other school staff, their families, and communities.

Schools are an important part of the infrastructure of communities, as they provide safe, supportive learning environments for students, employ teachers and other staff, and enable parents, guardians, and caregivers to work. Schools also provide critical services that help to mitigate health disparities, such as school meal programs, and social, physical, behavioral, and mental health services. School closure disrupts the delivery of these critical services to children and families, and places additional economic and psychological stress on families, which can increase the risk for family conflict and violence. ^{[1], [2]}

The unique and critical role that schools play makes them a priority for opening and remaining open, enabling students to receive both academic instruction and support as well as critical services. In order to prioritize opening schools safely and helping them to remain open, communities should consider adopting actions to mitigate community transmission. CDC's [Implementation of Mitigation Strategies for Communities with Local COVID-19 Transmission](#) has strategies for community mitigation to reduce or prevent the spread of COVID-19, which in turn will help schools to open and stay open safely. Recognizing the importance of providing safe, in-person learning, communities may also wish to help schools by examining whether additional public or private space, including outdoor spaces, that is currently underutilized might be safely repurposed for school and instructional purposes.

Returning to school in fall 2020 poses new challenges for schools, including implementing mitigation measures (e.g., social distancing, cleaning and disinfection, hand hygiene, use of masks), addressing social, emotional, and mental health needs of students, addressing potential learning loss, and preparing for the probability of COVID-19 cases within the broader school community.

This guidance provides information about:

- What is currently known about COVID-19 among school-aged children
- The importance of going back to school safely
- What is currently known about SARS-CoV-2 (the virus that causes COVID-19) transmission in schools and its impact on community transmission
- The ways administrators for kindergarten through grade 12 (K-12) schools can plan and prepare for in-person instruction and minimize the impact of potential closures

What is known about the signs and symptoms, burden, and transmission of SARS-CoV-2 among children?

Signs and symptoms

Common COVID-19 symptoms [among children](#) include fever, headache, sore throat, cough, fatigue, nausea/vomiting, and diarrhea. ^[3] However, many children and adults infected with the virus that causes COVID-19 are asymptomatic (meaning they have no signs or symptoms of illness).

Impact of COVID-19 on children

Collecting and sharing data, including how it affects different places and populations, is important for understanding the context and burden of the COVID-19 pandemic. School officials should make decisions about school reopening based on available data including levels of community transmission and their capacity to implement appropriate mitigation measures in schools. Children appear to be at lower risk for contracting COVID-19 compared to adults. While some children have been sick with COVID-19, adults make up nearly 95% of reported COVID-19 cases. ^[4] Early reports suggest children are less likely to get COVID-19 than adults, and when they do get COVID-19, they generally have a less serious illness. ^[5] As of July 21, 2020, 6.6% of reported COVID-19 cases and less than 0.1% of COVID-19-related deaths are among children and adolescents less than 18 years of age in the United States. ^[6]

Early reports suggest the number of COVID-19 cases among children may vary by age and other factors. Adolescents aged 10-17 may be more likely to become infected with SARS-CoV-2 than children younger than age 10, ^{[7], [8]} but adolescents do not appear to be at higher risk of developing severe illness. ^[9] There are currently a higher proportion of COVID-19 cases among Hispanic/Latino children as compared to non-Hispanic white children. Children and adults with certain [underlying medical conditions](#) are at [increased risk of severe illness](#) from COVID-19. ^[10] Severe illness means that they may require hospitalization, intensive care, or a ventilator to help them breathe, or may even die. Children with intellectual and developmental disabilities are more likely to have [comorbid medical conditions](#) (e.g., diseases of the respiratory system; endocrine, nutritional and metabolic diseases; and diseases of the circulatory system) that may put them at increased risk for severe illness from COVID-19. ^[11] Although rare, some children have developed multisystem inflammatory syndrome (MIS-C) after exposure to SARS-CoV-2. As of May 20, 2020, the majority of children hospitalized with MIS-C had recovered. ^[12]

Data on SARS-CoV-2 transmission among children are limited. Evidence from other countries suggests that the majority of children with COVID-19 were infected by a family member. ^[13] For example, the first pediatric patients in South Korea and Vietnam were most likely from contact with an adult family member. ^{[14], [15]} Published reports from contact tracing of students with COVID-19 in schools from France, Australia, and Ireland suggest that students are not as likely to transmit the virus to other students compared to household contacts. ^{[16], [17], [18]} However, more research is needed on SARS-CoV-2 transmission between children and household members.

What is known about how schools have reopened and the impact on SARS-CoV-2 transmission?

Internationally, schools have responded to COVID-19 using a variety of approaches. ^{[19], [20]} For example, China, Denmark, Norway, Singapore, and Taiwan all required temperature checks at school entry. ^[21] Most countries have changed the way they operate to reduce class sizes, increase physical distance between students, and keeping students in defined groups to reduce contacts (i.e., [cohorting](#)). ^[22] Furthermore, many countries have staggered attendance, start and stop times, and created alternating shifts to enable social distancing. In some places this means that only certain students have returned to schools, either by grade range or need. For example, Denmark was the first European country to reopen schools. Denmark staggered students' reentry in waves (e.g., one group started school first, followed by another group at a later date), with limited class sizes and using other social distancing measures. ^[23] Younger students (under age 12) returned first based on their lower health risk and need for more supervision than older students. Class sizes were reduced to allow physical distancing. In Taiwan, students returned to school with mandatory temperature checks and use of face masks. Rather than national school closures, Taiwan relied on local decision-making to determine if classroom or school closures were needed, based on infection rates. ^[24]

There is mixed evidence about whether returning to school results in increased transmission or outbreaks. For example, Denmark initially reported a slight increase in cases in the community after reopening schools and child care centers for students aged 2-12 years, followed by steady declines in cases among children between ages 1 and 19 years. ^[25] In contrast, Israel experienced a surge of new cases and outbreaks in schools after reopening and relaxing social distancing measures; it is unclear what caused the increase in cases and what other mitigation measures the schools had implemented. ^[26] In summer 2020, Texas reported more than 1,300 COVID-19 cases in childcare centers; however, twice as many staff members had been diagnosed as children, suggesting that children may be at lower risk of getting COVID-19 than adults. ^[27]

It is important to consider community transmission risk as schools reopen. Evidence from schools internationally suggests that school re-openings are safe in communities with [low SARS-CoV-2 transmission](#) rates. ^[28] Computer simulations from Europe have suggested that school re-openings may further increase transmission risk in communities where transmission is already high. ^[29] More research and evaluation is needed on the implementation of mitigation strategies (e.g., social distancing, masks, hand hygiene, and use of [cohorting](#)) used in schools to determine which strategies are the most effective. Such research would improve understanding of the impact of mitigation strategies on the risk of SARS-CoV-2 transmission in schools, and ongoing monitoring and surveillance of transmission in schools could help with timely outbreak detection and prevent wider spread.

Why is it important to open schools for in-person instruction?

While opening schools – like opening any building or facility—does pose a risk for the spread of COVID-19, there are many reasons why opening schools in the fall of 2020 for in-person instruction is important.

Schools play a critical role in the wellbeing of communities

Schools are a fundamental part of the infrastructure of communities. Schools provide safe and supportive environments, structure, and routines for children, as well as other needed support services to children and families. Schools play a vital role in the economic health of communities by employing teachers and other staff and helping parents, guardians, and caregivers work.

Schools provide critical instruction and academic support

Schools provide critical instruction and academic support that benefit students and communities in both the short- and long-term. The main role and priorities of K-12 educational institutions are to provide age-appropriate instruction and support students' academic development. Reopening schools will provide in-person instruction for students, facilitate increased communication between teachers and students, and provide students with critical academic services, including school-based tutoring, special education, and other specialized learning supports.

Studies show that students have experienced learning loss during the period of school closure and summer months. ^[30] In-person instruction for students has advantages over virtual learning, particularly when virtual learning was not the planned format for instruction, and schools may not have the resources or capability to transition fully to virtual learning. In-person classroom instruction has the added benefit for many students of interpersonal interaction between the student and the teacher and the student and peers. ^[31] Teachers are able to more actively participate in student learning, provide feedback as students encounter challenges, and promote active learning among students. ^[32]

In-person instruction may be particularly beneficial for students with additional learning needs. Children with disabilities may not have access through virtual means to the specialized instruction, related services or additional supports required by their Individualized Education Programs (IEPs) or 504 Plans. ^[33] Students may also not have access through virtual means to quality English Language Learning (ELL). ^[34]

When schools are closed to in-person instruction, disparities in educational outcomes could become wider, as some families may not have capacity to fully participate in distance learning (e.g., computer and internet access issues, lack of parent, guardian, or caregiver support because of work schedules) and may rely on school-based services that support their child's academic success. The persistent achievement gaps that already existed prior to COVID-19 closures, such as disparities across income levels and racial and ethnic groups, could worsen and cause long-term effects on children's educational outcomes, health, and the economic wellbeing of families and communities. ^{[35], [35]} While concern over higher rates of COVID-19 among certain racial/ethnic groups may amplify consideration of closing a school that educates primarily racial minority students, there should also be consideration that these may also be the schools most heavily relied upon for students to receive other services and support, like nutrition and support services.

Schools play a critical role in supporting the whole child, not just the academic achievement of students

Social and emotional health of students can be enhanced through schools

Social interaction among children in grades K-12 is important not only for emotional wellbeing, but also for children's language, communication, social, and interpersonal skills. ^[37] Some students may have experienced social isolation and increased anxiety while not physically being in school due to COVID-19. Resuming in-person instruction can support students' social and emotional wellbeing. ^[38] Schools can provide a foundation for socialization among children. When children are out of school, they may be separated from their social network and peer-to-peer social support. Schools can facilitate the social and emotional health of children through curricular lessons that develop students' skills to recognize and manage emotions, set and achieve positive goals, appreciate others' perspectives, establish and maintain positive relationships, and make responsible decisions. ^[39]

Mental health of students can be fostered through school supports and services

Schools are an important venue for students to receive [emotional and psychological support](#) from friends, teachers, and other staff members. Lengthy school building closures can leave some students feeling isolated from important friendships and support from other caring adults. ^[40] Schools also provide critical psychological, mental and behavioral health (e.g., psychological counselling, mental and behavioral assessment) services to children who may not have access to these services outside of school. School closures have limited the availability of these services. Furthermore, isolation and uncertainty about the COVID-19 pandemic can create feelings of [hopelessness and anxiety](#) while removing important sources of social support. Some students may have experienced trauma through the loss of a loved one from COVID-19. Increases in anxiety and depression may occur when students do not have the structure and routine that being in school brings to their daily lives. Finally, having opportunities to be physically active through recess and physical education can help improve students' feelings of anxiety and sadness. These physical activities should be provided regularly to students in a safe and supportive environment that includes physical distancing and strategies to reduce close contact between students.

Continuity of other special services is important for student success

Students who rely on key services, such as school food programs, special education and related services (e.g., speech and social work services, occupational therapy), and after school programs are put at greater risk for poor health and educational outcomes when school buildings are closed and they are unable to access such school health programs and services.

^[41] During periods of school building closures, students had limited access to many of these critical services, potentially widening educational and health disparities and inequities.

How can K-12 schools prepare for going back to in-person instruction?

Expect cases of COVID-19 in communities

International experiences have demonstrated that even when a school carefully coordinates, plans, and prepares, cases may still occur within the community and schools. Expecting and planning for the occurrence of cases of COVID-19 in communities can help everyone be prepared for when a case or multiple cases are identified.

Coordinate, plan, and prepare

Administrators should coordinate with local public health officials to stay informed about the status of COVID-19 transmission in their community. Additionally, planning and preparing are essential steps administrators can take to safely reopen schools:

- CDC's [Considerations for Schools](#) provides detailed recommendations for schools to plan and prepare to reduce the spread of COVID-19, establish healthy environments and maintain healthy operations. This guidance includes information about implementation of mitigation strategies, such as physical distancing within buses, classrooms and other areas of the school, healthy hygiene habits, cleaning and disinfection, use of masks, staggering student schedules, and planning for staff and teacher absences (e.g., back-up staffing plans).
- One important strategy that administrators can consider is [cohorting](#) (or "pods"), where a group of students (and sometimes teachers) stay together throughout the school day to minimize exposure for students, teachers, and staff across the school environment. At the elementary school level, it may be easier to keep the same class together for most of the school day. In middle and high school settings, cohorting of students and teachers may be more challenging. However, strategies such as creating block schedules or keeping students separated by grade can help to keep smaller groups of students together and limit mixing. Strategies that keep smaller groups of students together can also help limit the impact of COVID-19 cases when they do occur in a school. If a student, teacher, or staff member tests positive

for SARS-CoV-2, those in close contact should follow CDC [quarantine guidance](#). This helps prevent a disruption to the rest of the school and community by limiting the exposure. Schools should have systems in place to support continuity or learning for students who need to stay home for either isolation or quarantine. This includes access to online learning, school meals, and other services. The same holds for students with additional needs, including children with a disability, that makes it difficult to adhere to mitigation strategies.

Operating Schools During COVID-19: Guiding principles and mitigation strategies to use when school is open

Prepare for potential COVID-19 cases and increased school community transmission

Schools should be prepared for COVID-19 cases and exposure to occur in their facilities. Collaborating with [local health officials](#) will continue to be important once students are back to school, as they can provide regular updates about the status of COVID-19 in the community and help support and maintain the health and wellbeing of students, teachers, and staff. Having a plan in place for maintaining academic instruction and ensuring students have access to special services is also critical.

Making decisions about school operations

Administrators should make decisions in collaboration with local health officials based on a number of factors, including the [level of community transmission](#), whether cases are identified among students, teachers, or staff, what other indicators local public health officials are using to assess the status of COVID-19, and whether student, teacher, and staff cohorts are being implemented within the school.

What is the level of community transmission?


There are specific strategies schools can implement based on the [level of community transmission](#) reported by local health officials:

- If there is [no to minimal community transmission](#), reinforcing everyday preventive actions, ensuring [proper ventilation](#) within school facilities, including buses, and maintaining cleaning and disinfection practices remain important. These actions can help minimize potential exposure. Schools should also monitor absenteeism among teachers, staff, and students to identify trends and determine if absences are due to COVID-19, symptoms that led to quarantine, concerns about being in the school environment and personal health and safety, or positive test results. Anyone who tests positive for COVID-19 should [stay home and self-isolate](#) for the timeframe recommended by public health officials. Anyone who has had [close contact](#) with someone who has tested positive or is symptomatic for COVID-19 should stay home until receiving a negative result, or [stay home and monitor for symptoms](#).
- If there is *minimal to moderate* community transmission, schools should follow the actions listed above, and continue implementing mitigation strategies such as [social distancing](#), use of [masks](#), reinforcing everyday preventive actions, and maintaining cleaning and disinfection. This also can include ensuring that student and staff groupings/cohorts are as static as possible and that mixing groups of students and staff is limited.
- If there is [substantial, controlled](#) transmission, significant mitigation strategies are necessary. These include following all the actions listed above and also ensuring that student and staff groupings/cohorts are as static as possible with limited mixing of student and staff groups, field trips and large gatherings and events are canceled, and communal spaces (e.g., cafeterias, media centers) are closed.
- If there is [substantial, uncontrolled](#) transmission, schools should work closely with local health officials to make decisions on whether to maintain school operations. The health, safety, and wellbeing of students, teachers, staff and their families is the most important consideration in determining whether school closure is a necessary step. Communities can support schools staying open by implementing strategies that decrease a community's level of transmission. However, if community transmission levels cannot be decreased, school closure is an important consideration. Plans for virtual learning should be in place in the event of a school closure.

Did a student or staff member test positive for SARS-CoV-2?

If someone within the school community (e.g., student, teacher, staff) tested positive for SARS-CoV-2, assessing the level of risk is important to determine if, when, and for how long part or all of a school should be closed. K-12 administrators can also refer to CDC's [Interim Considerations for K-12 for School Administrators for SARS-CoV-2 Testing](#), which provides additional information about [viral diagnostic testing](#). A single case of COVID-19 in a school would not likely warrant closing the entire

information about [viral diagnostic testing](#). A single case of COVID-19 in a school would not likely warrant closing the entire school, especially if levels of community transmission are not high. The levels of community transmission described above and the extent of [close contacts](#) of the individual who tested positive for SARS-CoV-2 should all be considered before closing. These variables should also be considered when determining how long a school, or part of the school, stays closed. If the transmission of the virus within a school is higher than that of the community, or if the school is the source of an outbreak, administrators should work collaboratively with local health officials to determine if temporary school closure is necessary. Students, teachers, and staff who test positive or had close contact of the individual who tested positive should be provided with guidance for when it is safe to [discontinue self-isolation](#) or end [quarantine](#).

- **What other indicators are local public health officials using to assess the status of COVID-19?** Local health officials can help inform decisions related to school operations by examining public health [indicators](#)  that are used to determine level of community transmission and disease severity levels. For example, indicators such as healthcare capacity (e.g., staffing, ICU bed occupancy), changes in newly identified COVID-19 cases, and percentage of people testing positive for SARS-CoV-2 infections in the community might be useful to determine whether to maintain or modify school operations. These indicators are set by state, local, tribal, and territorial health and healthcare officials, and should be shared with schools for decision making.
- **Is a cohort approach used within the school?** The level of student and staff mixing within the school should also be considered. If students are kept in cohorts to minimize mixing of students, exposure to an individual with COVID-19 may be limited to one particular cohort and not pose a broad risk to the rest of the school. Cohorts that have been in close contact with someone with COVID-19 can switch to virtual learning and stay home in accordance with CDC's guidelines for [quarantine](#) and [self-isolation](#), and the school may remain open.

Communicate with families, staff, and other partners

When preparing to go back to school, regular communication should be used to update students, families, teachers, and staff about academic standards, meal program services, and access to other school-based essential services that students and families rely on.

Regular communication with families, staff, and other partners should include:

- Updates about the status of COVID-19 in the school and community
- Notification when there are COVID-19 cases in the school (when communicating about the health status of students, schools should take care to avoid disclosing personally identifiable information and should follow all applicable privacy requirements, including those of the Family Educational Rights and Privacy Act)
- Explanation of what parents, students, teachers, and staff can expect when returning to school; in particular, communicating about:
 - The importance of staying home when sick and [staying home to monitor symptoms if close contact occurred with a person who tested positive for SARS-CoV-2](#)
 - Considerations for COVID-19 symptom screenings
 - Types of social distancing measures being implemented
 - When students, teachers, staff and/or visitors will be expected to wear masks and whether masks will be available from the school.
 - Everyday [healthy hygiene practices](#) that will be implemented upon reopening (e.g., students, teachers, staff staying home when sick, hand hygiene, cleaning frequently touched surfaces)
- Actions being taken to prevent SARS-Cov-2 transmission in buses, school buildings and facilities
- [Actions that families and households can take to help prevent the spread](#) of COVID-19
- Actions families can take to [manage anxiety about COVID-19](#)
- Decisions about operational status, potential use of virtual learning if COVID-19 cases are identified among students, teachers, or staff, and
- Guidance on [caring for someone who is sick](#) and for [parents, guardians, and caregivers who are sick](#)
- Guidance on how to [reduce stigma](#). Fear and anxiety about a disease can lead to social stigma, which is negative attitudes and beliefs toward people, places, or things

Families and students who had to make alternative arrangements with community providers to receive services (e.g., physical or occupational therapy, speech therapy, mental health services) during periods of school closures may need additional support and communication to establish a transition plan upon returning to school. Additionally, some families may have experienced significant hardship that now increases the number of students who need or qualify for some services, such as school meal programs. Schools can take actions to identify, support, and communicate with families who need to initiate new services as schools prepare to open. Administrators can work with community partners to plan for additional school-based services and programs during the transition back to normal schedules in anticipation of an increased need for mental health services.

What is cohorting?

Cohorting (sometimes called podding) is a new term for a strategy that schools may use to limit contact between students and staff as part of their efforts to limit transmission of SARS-CoV-2 (the virus that causes COVID-19). These strategies work by keeping groups of students – and sometimes staff – together over the course of a pre-determined period of time. Ideally, the students and staff within a cohort will only have physical proximity with others in the same cohort. This practice may help prevent the spread of COVID-19 by limiting cross-over of students and teachers to the extent possible, thus:

- Decreasing opportunities for exposure or transmission of SARS-CoV-2
- Reducing contact with shared surfaces
- Facilitating more efficient contact tracing in the event of a positive case
- Allowing for targeted testing, quarantine, and/or isolation of a single cohort instead of school-wide measures in the event of a positive case or cluster of cases

Cohorting strategies are common practice in many elementary schools across the United States. Many elementary school students have the same teacher and classmates during the entire school year. Implementation of this strategy varies, depending on setting and resources. For example:

- Schools may keep cohorts together in one classroom, and have teachers rotate between rooms.
- Schools may alternate cohorts by days or weeks, with cohorts assigned to specific days or weeks.
- Schools may adopt a hybrid approach, with some cohorts assigned to in-person learning and others assigned to online learning.

Evidence of the impact of cohorting on spread of COVID-19 is limited. Some evidence from other viral disease outbreaks and school reopenings in international settings suggests that cohorting may be an important tool for mitigating COVID-19 spread. However, it is essential to note that those studies were conducted in very different contexts, in communities with lower transmission levels.

Additional resources for K-12 administrators

[Considerations for Schools](#)

[Masks](#)

[Latest COVID-19 Information](#)

[Social Distancing](#)

[Cleaning and Disinfection](#)

[COVID-19 Frequently Asked Questions](#)

[Guidance for Businesses and Employers](#)

[People at Higher Risk](#)

[Guidance for Schools and Childcare Centers](#)

[Managing Stress and Coping](#)

[COVID-19 Prevention](#)

[HIPAA and COVID-19](#)

Handwashing Information

CDC Communication Resources

Community Mitigation

OSHA Guidance on Preparing Workplaces for COVID-19

Approach for Monitoring and Evaluating Community Mitigation Strategies

FERPA & Coronavirus Disease 2019

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EXHIBIT D
TO DECLARATION OF
TIMOTHY P. FLANIGAN, MD
(EXHIBIT 4)

Operating schools during COVID-19: CDC's Considerations

 [cdc.gov/coronavirus/2019-ncov/community/schools-childcare/schools.html](https://www.cdc.gov/coronavirus/2019-ncov/community/schools-childcare/schools.html)

April 30, 2020



Summary of Changes

Updates have been made to align with the new [school resources and tools](#) that were released on July 23rd and 24th and the latest COVID-19 information.

Changes to the considerations as of August 21, 2020:

- Expanded considerations on planning and preparing schools before opening
- Updated considerations on ventilation
- Updated considerations on food service
- Updated considerations for students who may be unable to wear masks
- Updated considerations for students with special [healthcare needs](#) and [disabilities](#)
- Updated considerations on cohorting, staggering, and alternating strategies
- Updated considerations on recognizing signs and symptoms of COVID-19 and screening
- Updated considerations on coping and support
- Updated considerations on making plans for accommodations
- Updated considerations for Direct Service Providers (DSPs)

Considerations for schools

As communities in the United States consider how to safely re-open K-12 school buildings and in-person services, CDC offers updated considerations for mitigation strategies that K-12 school administrators can use to help protect students, teachers, and staff and slow the spread of COVID-19. These updated Considerations for Schools are intended to aid school administrators as they consider how to protect the health, safety, and wellbeing of students, teachers, staff, their families, and communities:

1. Promoting behaviors that reduce COVID-19's spread

2. Maintaining healthy environments
3. Maintaining healthy operations
4. Preparing for when someone gets sick

Schools should determine, in collaboration with state and local health officials to the extent possible, whether and how to implement each of these considerations while adjusting to meet the unique needs and circumstances of the local community. Implementation should be guided by what is feasible, practical, acceptable, and tailored to the needs of each community. It is also critically important to develop strategies that can be revised and adapted depending on the level of viral transmission in the school and throughout the community and done with close communication with state and/or local public health authorities and recognizing the differences between school districts, including urban, suburban, and rural districts. These considerations are meant to supplement—**not replace**—any Federal, state, local, territorial, or tribal health and safety laws, rules, and regulations with which schools must comply (e.g., Individuals with Disabilities Education Act).

School-based health facilities may refer to CDC’s Guidance for U.S. Healthcare Facilities and may find it helpful to reference the Ten Ways Healthcare Systems Can Operate Effectively During the COVID-19 Pandemic.

More information for schools

After reviewing the suggestions listed on this page, **school administrators** can use CDC’s School Considerations: Readiness and Action Planning Tool to protect students, staff and communities.

School-based health facilities may refer to CDC’s Guidance for U.S. Healthcare Facilities and may find it helpful to reference the Ten Ways Healthcare Systems Can Operate Effectively During the COVID-19 Pandemic.

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Guiding principles to keep in mind

Everyone’s goal is to prioritize the reopening of schools as safely and as quickly as possible given the many known and established benefits of in-person learning. In order to enable this and assist schools with their day-to-day operations, it is important to adopt and diligently implement actions to slow the spread of COVID-19 inside the school and out in the community. Vigilance to these actions will moderate the risk of in-school transmission regardless of the underlying community burden – with risk being the lowest if community transmission is low and there is fidelity to implementing proven mitigation strategies.

The statement The Importance of Reopening America’s Schools this Fall highlights that

parents and school leaders are very eager for schools to reopen, but understandably concerned about the health and safety of their children during the COVID-19 pandemic.

Children and COVID-19

In general, children with COVID-19 are less likely to have severe symptoms than adults or experience an asymptomatic infection – meaning they do not have any signs or symptoms of disease ([1-7](#)).

Analysis of pediatric COVID-19 hospitalization data from 14 states from early March to late July 2020 found the cumulative rate of COVID-19–associated hospitalization among children was over 20 times lower compared to adults (8.0 versus 164.5 per 100,000 population) ([8](#)). Although the cumulative rate is low, one in three children hospitalized with COVID-19 was admitted to an intensive care unit so the risk is not negligible ([8](#)). Similarly, the death rate among school-aged children is much lower than the rate among adults ([9](#), [10](#)). Also, the comparatively low risk for hospitalization and death among children themselves must be contextualized to the risk posed to teachers, school administrators, and other staff in the school environment. The risk of teachers, school administrators, and other staff in the school is expected to mirror that of other adults in the community if they contract COVID-19.

To be sure, the best available evidence from countries that have reopened schools indicates that COVID-19 poses low risks to school-aged children – at least in areas with low community transmission. That said, the body of evidence is growing that children of all ages are susceptible to SARS-CoV-2 infection ([3-7](#)) and, contrary to early reports ([11](#), [12](#)), might play a role in transmission ([7](#), [13](#), [14](#)).

The many benefits of in-person schooling should be weighed against the risks posed by COVID-19 spread. Of key significance, in-person learning is in the best interest of students, when compared to virtual learning. Application and adherence to mitigation measures provided in this document and similar to those implemented at essential workplaces can help schools reopen and stay open safely for in-person learning.

Deciding how to reopen

School officials should make decisions about school reopening based on available data including levels of community transmission and their capacity to implement appropriate mitigation measures in schools to protect students, teachers, administrators, and other staff. Schools should also consider other aspects of students' risk and wellbeing that arise when schools do not reopen for in-person classes. This includes the potential adverse impacts on students' social-emotional, behavioral, and mental health, as well as the critical

services provided to students to help mitigate health disparities and serve children in need, such as school lunch programs, special education services, after-school programs and mental health services.

The unique and critical role that schools play makes them a priority for reopening and remaining open, enabling students to receive both academic instruction and enable the provision of other critical services and supports. By strictly implementing mitigation strategies, schools will be able to meet the needs of their students and community, while reducing the risk of COVID-19 spread.

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Taking actions to lower the risk of COVID-19 spread

COVID-19 is mostly spread by respiratory droplets released when people talk, cough, or sneeze. It may be possible that a person can get COVID-19 by touching a surface or object that has the virus on it and then touching their own eyes, nose, or mouth. Therefore, personal prevention practices (such as handwashing, staying home when sick) and environmental cleaning and disinfection are important principles that are discussed below. Fortunately, there are a number of actions school administrators can take to help lower the risk of COVID-19 exposure and spread during school sessions and activities.

In order to reach the goal of reopening schools as safely and as quickly as possible for in-person learning, and help schools remain open, it is important to adopt and diligently implement actions to slow the spread of COVID-19 inside the school and out in the community. This means that students, families, teachers, school staff, and all community members take actions to protect themselves and others where they live, work, learn, and play.

Continuum of risk

By model of learning and implementation of proven mitigation strategies

In general, the risk of COVID-19 spread in schools increases across the continuum of virtual, hybrid, to in-person learning with the risk moderated for hybrid and in-person learning based upon the range of mitigation strategies put in place and the extent they are conscientiously followed.

While not exhaustive, this stratification attempts to characterize the risks of spread among students, teachers, and staff across this continuum:

Lowest risk:

Students and teachers engage in virtual-only classes, activities, and events

Some risk:

- Hybrid Learning Model: Some students participate in virtual learning and other students participate in in-person learning
- Small, in-person classes, activities, and events
- Cohorting, alternating schedules, and staggered schedules are applied rigorously
- No mixing of groups of students and teachers throughout/across school days
- Students and teachers do not share objects
- Students, teachers, and staff follow all steps to protect themselves and others at all times including proper use of face masks, social distancing, hand hygiene
- Regularly scheduled (i.e., at least daily or between uses) cleaning and disinfection of frequently touched areas implemented with fidelity

Medium risk:

- Hybrid Learning Model: Most students participate in in-person learning, some students participate in virtual learning
- Larger in-person classes, activities, and events
- Cohorting, alternating schedules, and staggered schedules are applied with some exceptions
- Some mixing of groups of students and teachers throughout/across school days
- Students and teachers minimally share objects
- Students, teachers, and staff follow all steps to protect themselves and others such as proper use of face masks, social distancing, hand hygiene
- Regularly scheduled cleaning and disinfection of frequently touched areas largely implemented with fidelity

Higher risk:

- Students and teachers engage in in-person only learning, activities, and events
- Students minimally mix between classes and activities
- Students and teachers share some objects
- Students, teachers, and staff follow some steps to protect themselves and others at all times such as proper use of face masks, social distancing, hand hygiene
- Irregular cleaning and disinfection of frequently touched areas

Highest risk:

- Students and teachers engage in in-person only learning, activities, and events
- Students mix freely between classes and activities
- Students and teachers freely share objects
- Students, teachers, and staff do not/are not required to follow steps to protect themselves and others such as proper use of face masks, social distancing, hand hygiene

- Irregular cleaning and disinfection of frequently touched areas

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Plan and prepare

Emergency operations plans: review, update, and implement EOPs

The most important actions for school administrators to take before reopening in-person services and facilities are **planning and preparing**. To best prepare, schools should expect that students, teachers, or staff may contract symptoms consistent with COVID-19, and schools must know what to do when this happens. Regardless of the number of cases in a community, every school should have a plan in place to protect staff, children, and their families from the spread of COVID-19 and a response plan in place for if/when a student, teacher, or staff member tests positive for COVID-19. This plan should be developed in collaboration with state and local public health departments; school nurses, parents, caregivers, and guardians; student leaders; community members; and other relevant partners. Schools should prioritize EOP components that address infectious disease outbreaks and their consequences.

Reference key resources on emergency preparedness while reviewing, updating, and implementing the EOP.

- Multiple federal agencies have developed resources on school planning principles and a 6-step process for creating plans to build and continually foster safe and healthy school communities *before, during, and after* possible emergencies.
- The Readiness and Emergency Management for Schools (REMS) Technical Assistance Center's website contains free resources, trainings, and technical assistance (TA) for schools and their community partners, including many tools and resources on emergency planning and response to infectious disease outbreaks. Schools may find these considerations are helpful for developing high-quality emergency operations plans.

School nurses, teachers, staff, parents, student leaders, and other community stakeholders (e.g., youth service organizations, health centers, etc.) should be involved in the development of the Emergency Operations Plans (EOP). Some of the strategies school administrators should consider while developing their EOP:

- Develop a protocol for monitoring local COVID-19 data in your community to keep track of the level of community transmission, to make decisions about changes to mitigation strategies, and to help determine whether school closures may be necessary. This should include daily review of official public health data for the community surrounding the school. Contact the state, local, tribal, or territorial Public Health Department for references to local COVID-19 data.
- Develop and test information-sharing systems (e.g., school-to-parent email or texting protocols, periodic virtual meetings with parent/teachers, etc.) with school and community partners and key stakeholders. Use institutional information systems for day-to-day reporting on information that can help to detect and respond to an outbreak, such as number of cases and absenteeism or changes in the number of visits to the health center by students, teachers, and other staff.
- Adopt mitigation strategies to promote healthy behaviors that reduce the spread of COVID-19, maintain healthy school environments and operations, and plan what to do if a student, teacher, or staff member gets sick.
- Examine the accessibility of information and resources to reduce the spread of COVID-19 and maintain healthy environments and determine whether they are culturally relevant, in plain language, and available in appropriate languages and accessible formats.
- In consultation with local officials, establish transparent criteria for when the school will suspend in-person learning to stop or slow the spread of COVID-19, as well as transparent criteria for when to resume in-person learning.
- Assess students' special needs (such as continuing education, meal programs, and other services) and develop strategies to address these needs if in-person learning is suspended or if a student needs to self-isolate as a result of a diagnosis of or exposure to COVID-19.
- Ensure the EOP takes into consideration students with disabilities, students with special healthcare needs, students experiencing homelessness, migrant students and those with English learners, etc.

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Promote behaviors that reduce spread of COVID-19

Schools may consider implementing several strategies to encourage behaviors that reduce the spread of COVID-19.

Staying home when appropriate

Educate staff and families about when they/their child(ren) should stay home and when they can return to school.

- Actively encourage employees and students who are sick or who have recently had close contact (less than 6 feet for fifteen minutes or more) with a person with COVID-19 to stay home. Develop policies that encourage sick employees and students to stay at home without fear of reprisal, and ensure employees, students, and students' families are aware of these policies. Consider not assessing schools based on absenteeism, and offering virtual learning and telework options, if feasible.
- Staff and students should stay home if they have tested positive for or are showing COVID-19 symptoms.
- Staff and students who have recently had close contact with a person with COVID-19 should also stay home and monitor their health.
- CDC's criteria can help inform when employees should return to work:
 - If they have been sick with COVID-19
 - If they have recently had close contact with a person with COVID-19

Hand hygiene and respiratory etiquette

- Teach and reinforce handwashing with soap and water for at least 20 seconds and increase monitoring to ensure adherence among students and staff.
- Encourage staff and students to cover coughs and sneezes with a tissue. Used tissues should be thrown in the trash and hands washed immediately with soap and water for at least 20 seconds.
- If soap and water are not readily available, hand sanitizer that contains at least 60% alcohol should be used (for staff and older children who can safely use hand sanitizer).

Masks

- Teach and reinforce use of masks. The use of masks is one of many important mitigation strategies to help prevent the spread of COVID-19. Masks are meant to protect other people in case the wearer is unknowingly infected but does not have symptoms. Masks are not Personal Protective Equipment (PPE) (e.g., surgical masks, respirators).
- Appropriate and consistent use of masks is most important when students, teachers, and staff are indoors and when social distancing is difficult to implement or maintain. Individuals should be frequently reminded not to touch the face covering or mask and to wash their hands or use hand sanitizer frequently. Information should be provided to staff, students, and students' families on proper use, removal, and washing of masks.

Masks should **not** be placed on:

- Children younger than 2 years old
- Anyone who has trouble breathing or is unconscious
- Anyone who is incapacitated or otherwise unable to remove the mask without assistance

Appropriate and consistent use of masks may be challenging for some students, teachers, and staff, including:

- - Younger students, such as those in early elementary school (Pre-K through 3rd grade).
 - Students, teachers, and staff with severe asthma or other breathing difficulties.
 - Students, teachers, and staff with special educational or healthcare needs, including intellectual and developmental disabilities, mental health conditions, and sensory concerns or tactile sensitivity.
- While masks are strongly encouraged to reduce the spread of COVID-19, CDC recognizes there are specific instances when wearing a mask may not be feasible. In these instances, parents, guardians, caregivers, teachers, staff, and school administrators should consider adaptations and alternatives whenever possible. They may need to consult with healthcare providers for advice about wearing masks.
- People who are deaf or hard of hearing—or those who care for or interact with a person who is hearing impaired—may be unable to wear masks if they rely on lipreading to communicate. This may be particularly relevant for faculty or staff teaching or working with students who may be deaf or hard of hearing. In this situation, consider using a clear mask that covers the nose and wraps securely around the face. If a clear mask isn't available, consider whether faculty and staff can use written communication (including closed captioning) and decrease background noise to improve communication while wearing a mask that blocks your lips.
- Masks are recommended as a simple barrier to help prevent respiratory droplets from traveling into the air and onto other people when the person wearing the mask coughs, sneezes, talks, or raises their voice. This is called source control.
- In addition to those who interact with people who are deaf or hard of hearing, the following groups of teachers and staff may also consider using clear masks:
- - Teachers of young students (e.g., teaching young students to read).
 - Teachers of students who are English language learners
 - Teachers of students with disabilities

- Clear masks should be determined not to cause any breathing difficulties or over heating for the wearer. Clear masks are not face shields. CDC does not recommend use of face shields for normal everyday activities or as a substitute for masks because of a lack of evidence of their effectiveness to control the spread of the virus from the source for source control.

Adequate supplies

Support healthy hygiene behaviors by providing adequate supplies, including soap and water, hand sanitizer with at least 60% alcohol (for staff and older children who can safely use hand sanitizer), paper towels, tissues, disinfectant wipes, masks (as feasible) and no-touch/foot-pedal trash cans.

Signs and messages

- Post signs in highly visible locations (e.g., school entrances, restrooms) that promote everyday protective measures and describe how to stop the spread of germs (such as by properly washing hands and properly wearing a mask). Signs should include visual cues (such as clear, easy-to-understand pictures demonstrating the healthy behaviors) at the appropriate reading and literacy level.
- Broadcast regular announcements on reducing the spread of COVID-19 on PA systems.
- Use simple, clear, and effective language about behaviors that prevent spread of COVID-19 when communicating with staff and families (such as on school websites, in emails, and through school social media accounts). If feasible, provide communication in multiple languages.
- Use communication methods that are accessible for all students, faculty, and staff, including those with disabilities.
- Translate materials into common languages spoken by students, faculty, and staff and people in the school community.
- Find freely available CDC print and digital resources on CDC's communications resources main page. CDC also has American Sign Language videos related to COVID-19 and other communication tools.

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Maintaining healthy environments

School administrators may consider implementing several strategies to maintain healthy environments.

Cleaning and disinfection

- Clean and disinfect frequently touched surfaces (e.g., playground equipment, door handles, sink handles, drinking fountains) within the school and on school buses at least daily or between use as much as possible. Use of shared objects (e.g., gym or physical education equipment, art supplies, toys, games) should be limited when possible, or cleaned between use.
- Develop a schedule for increased frequency of routine cleaning and disinfection.
- If transport vehicles (e.g., buses) are used by the school, drivers should practice all safety actions and protocols as indicated for other staff (e.g., hand hygiene, masks). To clean and disinfect school buses or other transport vehicles, see guidance for bus transit operators.
 - Develop a schedule for increased, routine cleaning and disinfection.
 - Ensure safe and correct use and storage of cleaning and disinfection products, including storing products securely away from children. Use products that meet EPA disinfection criteria.
 - Cleaning products should not be used near children, and staff should ensure that there is adequate ventilation when using these products to prevent children or themselves from inhaling toxic fumes.

Shared objects

- Discourage sharing of items that are difficult to clean or disinfect.
- Keep each child's belongings separated from others' and in individually labeled containers, cubbies, or areas.
- Ensure adequate supplies to minimize sharing of high touch materials to the extent possible (e.g., assigning each student their own art supplies, equipment) or limit use of supplies and equipment by one group of children at a time and clean and disinfect between use.
- Avoid sharing electronic devices, toys, books, and other games or learning aids.

Ventilation

Consider ventilation system upgrades or improvements and other steps to increase the delivery of clean air and dilute potential contaminants in the school. Obtain consultation from experienced Heating, Ventilation and Air Conditioning (HVAC) professionals when considering changes to HVAC systems and equipment. Some of the recommendations below are based on the American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE) Guidance for Building Operations During the COVID-19 Pandemic. Review additional ASHRAE guidelines for schools and universities for further information on ventilation recommendations for different types of buildings and building readiness for occupancy. Not all steps are applicable for all scenarios.

Improvement steps may include some or all of the following activities:

Increase outdoor air ventilation, using caution in highly polluted areas.

- - When weather conditions allow, increase fresh outdoor air by opening windows and doors. Do not open windows and doors if doing so poses a safety or health risk (e.g., risk of falling, triggering asthma symptoms) to children using the facility.
 - Use **fans** to increase the effectiveness of open windows. Position fans securely and carefully in or near windows so as not to induce potentially contaminated airflow directly from one person over another (strategic window fan placement in exhaust mode can help draw fresh air into room via other open windows and doors without generating strong room air currents).
 - Decrease occupancy in areas where outdoor ventilation cannot be increased.
- Ensure ventilation systems operate properly and provide acceptable indoor air quality for the current occupancy level for each space.
- Increase total airflow supply to occupied spaces, when possible.
- Disable demand-controlled ventilation (DCV) controls that reduce air supply based on occupancy or temperature during occupied hours.
- Further open minimum outdoor air dampers to reduce or eliminate HVAC air recirculation. In mild weather, this will not affect thermal comfort or humidity. However, this may be difficult to do in cold, hot, or humid weather.
- Improve central air filtration:
- - Increase air filtration to as high as possible without significantly diminishing design airflow.
 - Inspect filter housing and racks to ensure appropriate filter fit and check for ways to minimize filter bypass
 - Check filters to ensure they are within service life and appropriately installed.
- Consider running the HVAC system at maximum outside airflow for 2 hours before and after the school is occupied.
- Ensure restroom exhaust fans are functional and operating at full capacity when the school is occupied.
- Inspect and maintain local exhaust ventilation in areas such as restrooms, kitchens, cooking areas, etc.
- Use **portable high-efficiency particulate air (HEPA) fan/filtration systems** to help enhance air cleaning (especially in higher risk areas such as the nurse's office).
- Inspect and maintain local exhaust ventilation in areas such as bathrooms, kitchens, cooking areas, etc.

- Use portable high-efficiency particulate air (HEPA) fan/filtration systems to help enhance air cleaning (especially in higher risk areas such as nurse's office and special education classrooms).
- Generate clean-to-less-clean air movement by re-evaluating the positioning of supply and exhaust air diffusers and/or dampers (especially in higher risk areas such as the nurse's office).
- Consider using ultraviolet germicidal irradiation (UVGI) as a supplement to help inactivate SARS-CoV-2, especially if options for increasing room ventilation are limited.
- Ventilation considerations are also important on school buses.

*Note: The ventilation intervention considerations listed above come with a range of initial costs and operating costs which, along with risk assessment parameters such as community incidence rates, facemask compliance expectations and classroom density, may affect considerations for which interventions are implemented. Acquisition cost estimates (per room) for the listed ventilation interventions range from \$0.00 (opening a window; inspecting and maintain local exhaust ventilation; disabling DCV controls; or repositioning outdoor air dampers) to <\$100 (using fans to increase effectiveness of open windows; or repositioning supply/exhaust diffusers to create directional airflow) to approx. \$500 (adding portable HEPA fan/filter systems) to approx. \$1500 (adding upper room UVGI).

Water systems

The temporary shutdown or reduced operation of schools and reductions in normal water use can create hazards for returning students and staff. To minimize the risk of lead or copper exposure, Legionnaire's disease, and other diseases associated with water, take steps such as plumbing flushing to ensure that all water systems and features (e.g., sink faucets, drinking fountains, showers, decorative fountains) are safe to use after a prolonged facility shutdown, and follow EPA's 3Ts, (Training, Testing, and Taking Action) for reducing lead in drinking water. It may be necessary to conduct ongoing regular flushing after reopening. For additional resources, refer to EPA's Information on Maintaining or Restoring Water Quality in Buildings with Low or No Use. Drinking fountains should be cleaned and sanitized.

Modified layouts

- Space seating/desks at least 6 feet apart when feasible.
- Turn desks to face in the same direction (rather than facing each other), or have students sit on only one side of tables, spaced apart.
- Modify learning stations and activities as applicable so there are fewer students per group, placed at least 6 feet apart if possible.
- Create distance between children on school buses (g., seat children one child per row, skip rows) when possible.

Physical barriers and guides

- Install physical barriers, such as sneeze guards and partitions, particularly in areas where it is difficult for individuals to remain at least 6 feet apart (e.g., reception desks).
- Provide physical guides, such as tape on floors or sidewalks and signs on walls, to ensure that staff and children remain at least 6 feet apart in lines and at other times (e.g. guides for creating “one way routes” in hallways).

Communal spaces

- Close communal use shared spaces such as dining halls and playgrounds with shared playground equipment if possible; otherwise, stagger use and clean and disinfect between use.
- Add physical barriers, such as plastic flexible screens, between bathroom sinks especially when they cannot be at least 6 feet apart.

Food service

- Schools are essential to meeting the nutritional needs of children with many consuming up to half their daily calories at school. Nationwide more than 30 million children participate in the National School Lunch Program and nearly 15 million participate in the School Breakfast Program. (15, 16) There are several mitigation strategies that schools may implement while providing this critical service to their students.
- Avoid offering any self-serve food or drink options, such as hot and cold food bars, salad or condiment bars, and drink stations. Serve individually plated or pre-packaged meals instead, while ensuring the safety of children with food allergies.
- As feasible, have children eat meals outdoors or in classrooms, while maintaining social distance (at least 6 feet apart) as much as possible, instead of in a communal dining hall or cafeteria.
- Have teachers and children wash their hands with soap and water for 20 seconds or use a hand sanitizer that contains at least 60% alcohol before and after eating. Ensure children do not share food, either brought from home or from the food service.
- If communal dining halls or cafeterias will be used, ensure that children remain at least 6 feet apart in food service lines and at tables while eating. Clean and disinfect tables and chairs between each use.
- Ensure children do not share food or utensils. This helps prevent the spread of COVID-19 for all students and helps ensure the safety of children with food allergies:

- Use disposable food service items (e.g., utensils, trays).
 - If disposable items are not feasible or desirable, ensure that all non-disposable food service items and equipment are handled by staff with gloves and washed with dish soap and hot water or in a dishwasher.
 - Individuals should wash their hands after removing their gloves or after directly handling used food service items.
- If food is offered at any event, have pre-packaged boxes or bags for each attendee instead of a buffet or family-style meal.
 - Provide tissues and no-touch or foot pedal trash cans, where possible, for employees, volunteers, and students to use.
 - If possible, install touchless payment methods (pay without touching money, a card, or a keypad). Provide hand sanitizer right after handling money, cards, or keypads.
 - Of Note: USDA has issued the COVID-19 Nationwide Waiver to Allow Meal Pattern Flexibility in the Child Nutrition Programs.

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Maintaining healthy operations

Schools may consider implementing several strategies to maintain healthy operations.

Protections for staff and children at higher risk for severe illness from COVID-19

- Offer options for staff at higher risk for severe illness (including older adults and people of all ages with certain underlying medical conditions or disabilities) that limit their exposure risk (e.g., telework, modified job responsibilities that limit exposure risk).
- Offer options for students at higher risk of severe illness that limit their exposure risk (e.g., virtual learning opportunities).
- Provide inclusive programming for children and youth with special healthcare needs and disabilities that allows on-site or virtual participation with appropriate accommodations, modifications, and assistance (e.g., students with disabilities may have more difficulties accessing and using technology for virtual learning).
- Consistent with applicable law, put in place policies to protect the privacy of people at higher risk for severe illness regarding underlying medical conditions.

Regulatory awareness

Be aware of local or state regulatory agency policies related to group gatherings to determine if events can be held.

Identifying small groups and keeping them together (cohorting or podding)

Dividing students and teachers into **distinct groups that stay together throughout an entire school day** during in-person classroom instruction. Limit mixing between groups such that there is minimal or no interaction between cohorts.

Alternating schedule

Alternate the days when cohorts physically attend school. For example, certain grades or classrooms physically attend school on Monday/Tuesday and other grades or classrooms physically attend on Thursday/Friday (and the school is thoroughly cleaned in between, on Wednesday). As another example, some schools internationally have rotated in-person attendance weekly with one group of students attending during a week, followed by a different group the next week in rotation with thorough cleaning on the weekends.

Staggered scheduling

- Stagger student arrival, drop-off, and pick-up time or locations by cohort, or put in place other protocols to limit contact between cohorts and direct contact with parents, guardians, and caregivers as much as possible.
- When possible, use flexible worksites (e.g., telework at home) and flexible work hours (e.g., staggered shifts) to help establish policies and practices for social distancing (staying at least 6 feet apart).

Mix of virtual learning and in-class learning (hybrid schedule)

Hybrid options can apply a cohort approach to the in-class education provided.

Virtual/at-home only

Students and teachers engage in virtual-only classes, activities, and events.

Gatherings, visitors, and field trips

- Pursue virtual group events, gatherings, or meetings, if possible, and promote social distancing of at least 6 feet between people if events are held. Limit group size to the extent possible.
- Pursue options to convene sporting events and participate in sports activities in ways that reduce the risk of transmission of COVID-19 to players, families, coaches, and communities.
- Limit any nonessential visitors, volunteers, and activities involving external groups or organizations as possible – especially with individuals who are not from the local geographic area (e.g., community, town, city, county).

- **Limit cross-school transfer for special programs.** For example, if students are brought from multiple schools for special programs (e.g., music, robotics, academic clubs, sports), consider using distance learning and virtual environments to deliver the instruction or temporarily offering duplicate programs in the participating schools. For youth sports considerations visit the FAQs for Youth Sports Programs (e.g., physical distance, wearing masks, etc.).
- Develop a plan for staff who travel between schools (e.g., school nurses, psychologists, therapists). For example, consider allowing them to have virtual meetings in place of physical school visits and revise scheduling to limit their visits to multiple campuses.
- Pursue virtual activities and events in lieu of field trips, student assemblies, special performances, school-wide parent meetings, and spirit nights, as possible.

Designated COVID-19 point of contact

Designate a staff person, such as the school nurse, to be responsible for responding to COVID-19 concerns. All school staff and families should know who this person is and how to contact them.

Travel and transit

- Consider options for limiting non-essential travel in accordance with state and local regulations and guidance.
- Consider postponing or canceling upcoming student international travel programs.
- Encourage students, faculty and staff who use public transportation or ride sharing to use forms of transportation that minimize close contact with others (e.g., biking, walking, driving or riding by car either alone or with household members).
- Ensure options for safe travel on campus for people with disabilities. For example, social distancing in designated seating areas for wheelchairs may not be possible and drivers who may need to have close contact to assist a person with disabilities.
- Encourage students, faculty and staff who use public transportation or ride sharing to follow CDC guidance on how to protect yourself when using. Additionally, encourage them to commute during less busy times and clean their hands as soon as possible after their trip.

Participation in community response efforts

Consider participating with local authorities in broader COVID-19 community response efforts (e.g., sitting on community response committees).

Communication systems

Put systems in place for:

- Staff and families should self-report to the school if they or their student have symptoms of COVID-19, a positive test for COVID-19, or were exposed to someone with COVID-19 within the last 14 days. The reporting system should be consistent with the health information sharing regulations for COVID-19 (e.g. see “Notify Health Officials and Close Contacts” in the **Preparing for When Someone Gets Sick section below**) and other applicable federal and state laws and regulations relating to privacy and confidentiality, such as the Family Educational Rights and Privacy Act (FERPA). The communication methods should be accessible for all students, faculty and staff, including those with disabilities and limited English proficiency (e.g., use interpreters and translated materials)
- Notifying staff, families, and the public of school closures and any restrictions in place to limit COVID-19 exposure (e.g., limited hours of operation).

Leave (time off) policies and excused absence policies

Implement flexible sick leave policies and practices that enable staff to stay home when they are sick, have been exposed, or caring for someone who is sick.

- - Examine and revise policies for leave, telework, and employee compensation.
 - Leave policies should be flexible and not punish people for taking time off and should allow sick employees to stay home and away from co-workers. Leave policies should also account for employees who need to stay home with their children if there are school or childcare closures, or to care for sick family members. Additional flexibilities might include giving advances on future sick leave days and allowing employees to donate sick leave to each other, for example.
- Develop policies for return-to-school after COVID-19 illness. CDC’s criteria to discontinue home isolation and quarantine can inform these policies.

Back-up staffing plan

Monitor absenteeism of students and employees, cross-train staff, and create a roster of trained back-up staff.

Staff training

- Train staff on all safety protocols.
- Conduct training virtually or ensure that social distancing is maintained during training.

Recognize signs and symptoms

We learn more about COVID-19 every day, and as more information becomes available, CDC will continue to update and share information. As our knowledge and understanding of COVID-19 evolves, this guidance may change.

Based on the best available evidence at this time:

- **CDC does not currently recommend universal symptom screenings** (screening all students grades K-12) be conducted by schools.
- **Parents or caregivers should be strongly encouraged to monitor their children** for signs of infectious illness including COVID-19 every day.
- **Students who have symptoms of any infectious illness or symptoms consistent with COVID-19 should not attend school in-person.**

The profile of symptoms associated with COVID-19 remains under study and will be updated as warranted by research findings. **Further information on what symptoms may suggest infectious illness and recommended return-to-school policies is available at Screening K-12 Students for Symptoms of COVID-19: Limitations and Considerations.**

- - Schools that choose to conduct symptom screening should conduct these screenings safely and respectfully, and in accordance with any applicable privacy laws and regulations (e.g., confidentiality as required by the Americans with Disabilities Act (ADA) and the Family Educational Rights and Privacy Act [FERPA]).
 - The considerations detailed here are intended only for students in K-12 school settings. For guidance related to screening of staff, please refer to CDC's Interim Guidance for Businesses and Employers Responding to Coronavirus Disease 2019 and the Prevent Transmission Among Employees section of CDC's Resuming Business Toolkit.

Sharing facilities

Encourage any organizations that share or use the school facilities to also follow these considerations.

Support coping and resilience

- Encourage employees and students to take breaks from watching, reading, or listening to news stories about COVID-19, including social media if they are feeling overwhelmed or distressed.
- Promote employees and students eating healthy, exercising, getting sleep, and finding time to unwind.
- Encourage employees and students to talk with people they trust about their concerns and how they are feeling.

- Transparently communicate with staff, teachers, students, and families, including about mental health support services available at the school. These critical communications should be accessible to individuals with disabilities and limited English proficiency.
- Share facts about COVID-19 regularly through trusted sources of information to counter the spread of misinformation and mitigate fear.
- Consider posting signages for the national distress hotline: 1-800-985-5990, or text TalkWithUsto 66746
- Ensure continuity of mental health services, such as offering remote counseling.
- Encourage students to call 911 or the National Suicide Prevention Lifeline at 1-800-273-TALK (1-800-273-8255), 1-888-628-9454 for Spanish, or Lifeline Crisis Chat if they are feeling overwhelmed with emotions such as sadness, depression, anxiety, or feel like wanting to harm themselves or others.

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Prepare for when someone is sick with COVID-19

Schools may consider implementing several strategies to prepare for when someone is sick with COVID-19.

Advise staff and families of students sick with COVID-19 of home isolation criteria

Sick staff members or students should not return until they have met CDC's criteria to discontinue home isolation.

Make sure that staff and families know when they should stay home

Make sure that staff and families know that they (staff) or their children (families) should not come to school, and that they should notify school officials (e.g., the designated COVID-19 point of contact [e.g., school nurse]) if they (staff) or their child (families) test positive for COVID-19 or have been exposed to someone with COVID-19 symptoms or a confirmed or suspected case. These critical communications should be accessible to individuals with disabilities and limited English proficiency.

Isolate and transport students who develop symptoms while at school

Some students may develop symptoms of infectious illness while at school. Schools should take action to isolate students who develop these symptoms from other students and staff. Follow the school isolation protocol outlined in Screening K-12 Students for Symptoms of COVID-19: Limitations and Considerations when student develops symptoms of an infectious illness.

Clean and disinfect

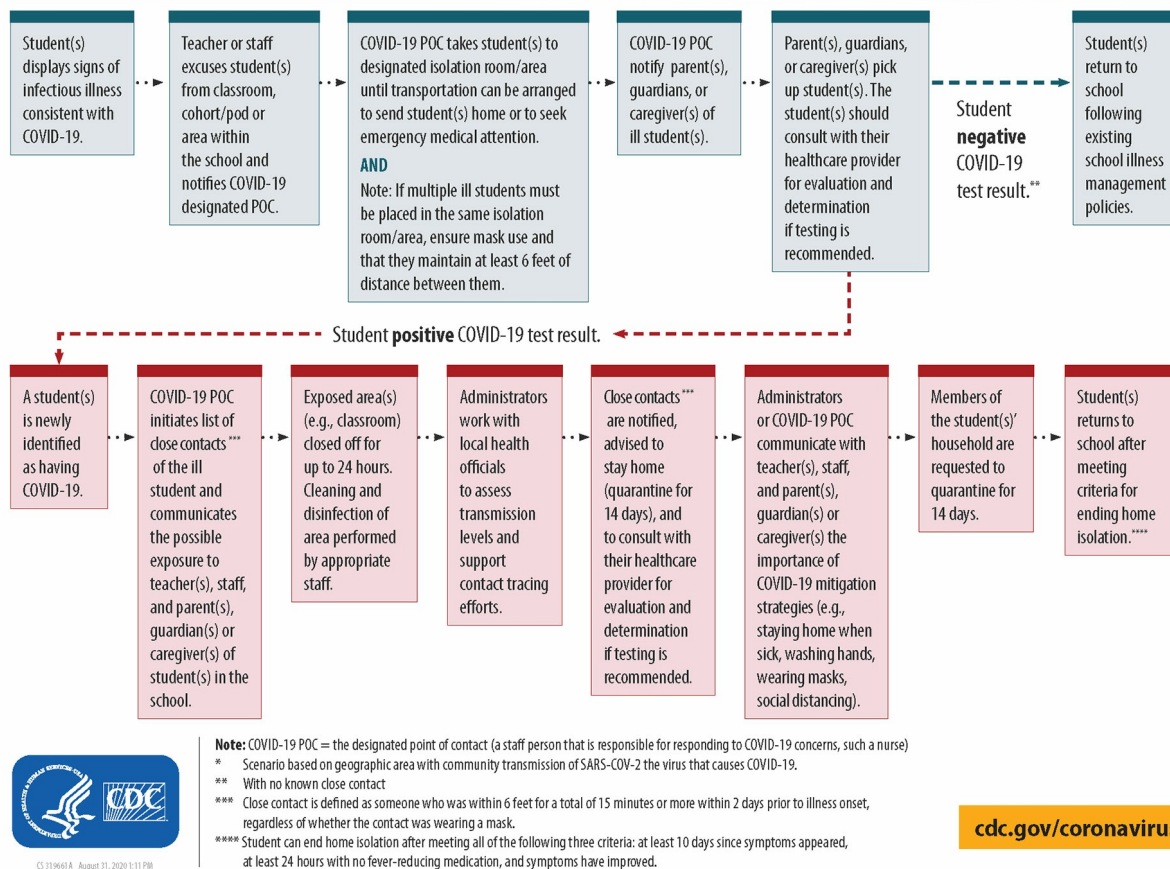
- Close off areas used by a sick person and do not use these areas until after cleaning and disinfecting them. For outdoor areas (e.g., playgrounds, sitting areas, outdoor eating areas, etc.), this includes surfaces or shared objects in the area, if applicable.
- Wait at least 24 hours before cleaning and disinfecting. If 24 hours is not feasible, wait as long as possible. Ensure safe and correct use and storage of cleaning and disinfection products, including storing products securely away from children.

Notify health officials and close contacts

- In accordance with state and local laws and regulations, school administrators should notify local health officials, staff, and families immediately of any case of COVID-19 while maintaining confidentiality in accordance with the Americans with Disabilities Act (ADA) and FERPA or and other applicable laws and regulations.
- Inform those who have had close contact with a person diagnosed with COVID-19 to stay home and self-monitor for symptoms, and follow CDC guidance if symptoms develop. Maintain confidentiality as required by the Americans with Disabilities Act (ADA) and Family Educational Rights and Privacy Act (FERPA) or and other applicable laws and regulations.
- A school might need to implement short-term building closure procedures **if/when an infected person has been on campus during their infectious period** and has close contact with others. If this happens, **work with local public health officials to determine next steps**. One option is an initial short-term class suspension and cancellation of events and activities (e.g., assemblies, spirit nights, field trips, and sporting events) to allow time for local health officials to gain a better understanding of the COVID-19 situation and help the school determine appropriate next steps, including whether such a suspension needs to be extended to stop or slow further spread of COVID-19. In situations where schools are cohorting students (e.g., in pods) administrators may choose to close the building in places (e.g., classrooms, common areas) where others were exposed to the infected person. In the event that local health officials do not recommend building or classroom closures, thoroughly cleaning the areas where the infected person spent significant time should be considered.
- Local health officials' recommendations whether to suspend school or events and the duration such suspensions should be made on a case-by-case basis using the most up-to-date information about COVID-19 and taking into account local case-counts, and the degree of ongoing transmission in the community.

What to do if a Student Becomes Sick Flowchart

WHAT TO DO IF A STUDENT BECOMES SICK AT SCHOOL OR REPORTS A NEW COVID-19 DIAGNOSIS*



Information includes:

- Student negative COVID-19 test result
- Student positive COVID-19 test result
- And more

What to do if a Student Becomes Sick Flowchart

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Students with disabilities or special healthcare needs

Plan for accommodations, modifications, and assistance for children and youth with disabilities and special healthcare needs

A customized and individualized approach for COVID-19 may be needed for children and youth with disabilities who have limited mobility; have difficulty accessing information due to visual, hearing, or other limiting factors; require close contact with direct service providers; have trouble understanding information; have difficulties with changes in routines; or have other concerns related to their disability. This approach should account for the following:

- Education should remain accessible for children in special education who have a 504 Plan or Individualized Education Program.
- Social distancing and isolating at school may be difficult for many people with disabilities.
- Wearing masks may be difficult for people with certain disabilities (e.g., visual or hearing impairments) or for those with sensory, cognitive, or behavioral issues.
- Students may require assistance or visual and verbal reminders to cover their mouth and nose with a tissue when they cough or sneeze, throw the tissue in the trash, and wash their hands afterwards.
- Where service or therapy animals are used, use guidance to protect the animal from COVID-19.
- Cleaning and disinfecting procedures may negatively affect students with sensory or respiratory issues.
- Students may require assistance or supervision washing their hands with soap and water for at least 20 seconds or using a hand sanitizer (containing at least 60% alcohol).
- Cleaning and disinfecting personal belongings, school objects, or surfaces may require assistance or supervision.
- Behavioral techniques can help all students, adjust to changes in routines and take preventive actions. These techniques may be especially beneficial for some children with disabilities and may include modeling and reinforcing desired behaviors and using picture schedules, timers, and visual cues. Organizations that support individuals with disabilities have information and resources to help schools with these behavioral techniques. In addition, behavioral therapists or local mental health or behavioral health agencies may be able to provide consultation for specific concerns.

Follow guidance for Direct Service Providers (DSPs)

Direct Service Providers (personal care attendants, direct support professionals, paraprofessionals, therapists, and others) provide a variety of home and community-based, health-related services that support individuals with disabilities. Services provided may include assistance with activities of daily living, access to health services, and more. DSPs are essential for the health and well-being of the individuals they serve.

- Ask Direct Service Providers (DSPs) before they enter school if they are experiencing any symptoms of COVID-19 or if they have been in contact with someone who has COVID-19. If DSPs provide services in other schools, ask specifically whether any of the other schools have had positive cases. For guidance related to screening of staff (to include DSPs), please refer to CDC's Interim Guidance for Businesses and Employers Responding to Coronavirus Disease 2019 and the Prevent Transmission Among Employees section of CDC's Resuming Business Toolkit.
- If there is potential that a DSP may be splashed or sprayed by bodily fluids during their work, they should use standard precautions to avoid getting infected. They will need to wear personal protective equipment (PPE) including a facemask, eye protection, disposable gloves, and a gown.
- CDC has developed guidance for DSPs. School administrators should review the DSP guidance and ensure that DSPs needing to enter the school are aware of those preventive actions.

After reviewing the suggestions listed on this page, school administrators can use CDC's School Considerations: Readiness and Action Planning Tool to protect students, staff and communities.

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Other Resources

EXHIBIT E
TO DECLARATION OF
TIMOTHY P. FLANIGAN, MD
(EXHIBIT 4)

American Academy
of Pediatrics



DEDICATED TO THE HEALTH OF ALL CHILDREN®

COVID-19 Planning Considerations: Guidance for School Re-entry



The purpose of this guidance revision is to continue to support communities, local leadership in education and public health, and pediatricians collaborating with schools in creating policies for school re-entry during the coronavirus disease 2019 (COVID-19) pandemic that foster the overall health of children, adolescents, educators, staff, and communities and are based on available evidence. Along with our colleagues in the field of education, the American Academy of Pediatrics (AAP) strongly advocates for additional federal assistance to schools throughout the United States, with no restrictions regarding their plans for in-person versus virtual learning. Regardless, in places in the United States with high levels of community transmission of severe acute respiratory syndrome-coronavirus 2 (SARS-CoV-2), the virus that causes COVID-19, where in-person learning is not possible, these schools will also need more assistance, not less, to support the additional staffing needs, alternative learning sites, hybrid educational models, and child care.

Schools and school-supported programs are fundamental to child and adolescent development and well-being and provide our children and adolescents with academic instruction, either in person or virtually; social and emotional skills; safety; reliable nutrition; physical/speech therapy and mental health services; and opportunities for physical activity, among other benefits. Schools also serve as critical centers in communities by supporting adult-focused activities (such as job training, neighborhood meetings, and parenting classes) as well as ensuring safe places for children and adolescents to be while parents or guardians are working, which in turn supports the local economy.

Beyond supporting the educational development of children and adolescents, schools play a critical role in addressing racial and social inequity. As such, it is critical to reflect on the differential impact the COVID-19 pandemic and the associated school closures have had on

different racial and ethnic groups and vulnerable populations. The AAP condemns the persistent racial and social inequities that exist within the US educational system. The disparities in school funding, quality of school facilities, educational staffing, and resources for enriching curriculum between schools have been exacerbated by the pandemic. Families rely on schools to provide child care; a safe, stimulating space for children to learn; opportunities for socialization; and access to school-based mental, physical, and nutritional health services. Without adequate support for families to access these services, disparities will likely worsen, especially for children who are English language learners, children with disabilities, children living in poverty, and children of African American/Black, Latinx/Hispanic, and Native American/Alaska Native origin.^{i,ii}

For children and adolescents in virtual learning models, educational disparities may widen further. According to the Pew Research Center, 1 in 5 teenagers are not able to complete schoolwork at home because of lack of a computer or internet connection.ⁱⁱⁱ This technological “homework gap” disproportionately affects Black, Hispanic, and low-income families.³

The AAP strongly recommends that school districts promote racial/ethnic and social justice by promoting the well-being of all children in any school-reopening plan, particularly children living in marginalized communities. To address these disparities, federal, state, and local governments should allocate resources to provide equitable access to educational supports. These recommendations are provided, acknowledging that our understanding of the COVID-19 pandemic is changing rapidly.

Any school re-entry policies should consider the following key principles:

- To be able to open schools safely, it is vitally important that communities take all necessary measures to limit the spread of the SARS-CoV-2.
- School policies must be flexible and nimble in responding to new information, and administrators must be willing to refine approaches when specific policies are not working.
- Schools must take a multi-pronged, layered approach to protect students, teachers, and staff. By using different approaches, these layers of protection will make in-person learning safe and possible.
- It is critically important to develop strategies that can be revised and adapted depending on the level of viral transmission and test positivity rate throughout the community and in the schools, recognizing the differences between school districts, including urban, suburban, and rural districts.

- School districts must be in close communication and coordinate with state and/or local public health authorities, school nurses, local pediatric practitioners, and other medical experts.
- School re-entry policies should be practical, feasible, and appropriate for child and adolescent's developmental stage and address teacher and staff safety.
- Special considerations and accommodations to account for the diversity of youth should be made, especially for vulnerable populations, including those who are medically fragile or complex, live in poverty, have developmental challenges, or have disabilities, with the goal of safe return to school. These youth and their families should work closely with their pediatrician using a shared decision-making approach regarding return to school.
- Pediatricians, families, and schools should partner together to collaboratively identify and develop accommodations when needed for any child or adolescent with unique medical needs.
 - Children and adolescents who need customized considerations should not be automatically excluded from school unless required in order to adhere to local public health mandates or because their unique medical needs would put them at increased risk for contracting COVID-19 during current conditions in their community.
- School policies should be guided by supporting the overall health and well-being of all children, adolescents, their families, and their communities but should also look to create safe working environments for educators and school staff. This focus on overall health and well-being includes addressing the behavioral/mental health needs of students and staff.
- These policies should be consistently communicated in languages other than English, if needed, based on the languages spoken in the community, to avoid marginalization of parents/guardians who are of limited English proficiency or do not speak English at all.
- Federal, state, and local funding should be provided for all schools so they can provide all the safety measures required for students and staff. Funding to support virtual learning and provide needed resources must be available for communities,

schools, and children facing limitations implementing these learning modalities in their home (eg, socioeconomic disadvantages) or in the event of school re-closure because of resurgence of SARS-CoV-2 in the community or a school outbreak.

With the above principles in mind, **the AAP strongly advocates that all policy considerations for the coming school year should start with a goal of having students physically present in school.** *Unfortunately, in many parts of the United States, there is currently uncontrolled spread of SARS-CoV-2. Although the AAP strongly advocates for in-person learning for the coming school year, the current widespread circulation of the virus will not permit in-person learning to be safely accomplished in many jurisdictions.* The importance of in-person learning is well-documented, and there is already evidence of the negative impacts on children because of school closures in the spring of 2020. Lengthy time away from school and associated interruption of supportive services often results in social isolation, making it difficult for schools to identify and address important learning deficits as well as child and adolescent physical or sexual abuse, substance use, depression, and suicidal ideation. This, in turn, places children and adolescents at considerable risk of morbidity and, in some cases, mortality. Beyond the educational impact and social impact of school closures, there has been substantial impact on food security and physical activity for children and families. The disproportionate impact this has had on Black, Latinx, and Native American/Alaskan Native children and adolescents must also be recognized.

Policy makers and school administrators must also consider the mounting evidence regarding COVID-19 in children and adolescents, including the role they may play in transmission of the infection. SARS-CoV-2 appears to behave differently in children and adolescents than other common respiratory viruses, such as influenza, on which much of the current guidance regarding school closures is based. Although children and adolescents play a major role in amplifying influenza outbreaks, to date, this does not appear to be the case with SARS-CoV-2. Although many questions remain, the preponderance of evidence indicates that children and adolescents can become infected and are less likely to be symptomatic and less likely to have severe disease resulting from SARS-CoV-2 infection.^{iv} We continue to learn more about the role children play in transmission of SARS-CoV-2. At present, it appears that children younger than 10 years may be less likely to become infected and less likely to spread infection to others, although further studies are needed.^v More recent data suggest children older than 10 years may spread SARS-CoV-2 as efficiently as adults, and this information should be part of the considerations taken in determining how to safely and effectively open schools. Additional in-depth studies are needed to truly understand the infectivity and transmissibility of this virus in

anyone younger than 18 years, including children and adolescents with disabilities and medical complexities. Policies to mitigate the spread of COVID-19 within schools must be balanced with the previously noted known harms to children, adolescents, families, and the community that come with keeping children at home.

Finally, policy makers and school administrators should acknowledge that COVID-19 policies are intended to mitigate, not eliminate, risk. No single action or set of actions will completely eliminate the risk of SARS-CoV-2 transmission, but implementation of several coordinated interventions can greatly reduce that risk. For example, where physical distance cannot be maintained, students (older than 2 years) and staff should wear cloth face coverings (unless medical or developmental conditions prohibit use). In the following sections, some general principles are reviewed that policy makers and school administrators should consider as they safely plan for the coming school year. For all of these, engagement of the entire school community, including teachers and staff, regarding these measures should begin early, ideally at least several weeks before the start of the school year.

Since this guidance was first released, there have been several other documents released by the [Centers for Disease Control and Prevention](#) (CDC), [National Association of School Nurses](#), and the [National Academy of Sciences, Engineering, and Medicine](#). All these documents are consistent regarding the importance of considering the degree to which SARS-CoV-2 is circulating in a community in making school re-opening policies. In many places in the United States at the present time, opening schools to in-person learning for all students is likely not feasible because of widespread community transmission and high levels of positivity in testing. Even in these communities, though, in-person learning should still be the goal and may be feasible as the epidemiology improves. Countries that have been able to successfully open schools have had low rates of community SARS-CoV-2 circulation. This guideline is intended to augment, not replace, guidance from the CDC and others and should be used in concert with other guidance. Ultimately, the decision to re-open schools to in-person learning should be based on the guidance of local and state public health authorities and school administrators.

Physical Distancing Measures

Physical distancing, sometimes referred to as social distancing, is simply the act of keeping people separated with the goal of limiting spread of contagion between individuals. It is fundamental to lowering the risk of spread of SARS-CoV-2, as the primary mode of transmission is through respiratory droplets by persons in close proximity. There is a conflict

between optimal academic and social/emotional learning in schools and strict adherence to current physical distancing guidelines. For example, the CDC recommends that schools "space seating/desks at least 6 feet apart when feasible." In many school settings, 6 feet between students is not feasible without drastically limiting the number of students. Some countries have been able to successfully reopen schools after first controlling community-wide spread of SARS-CoV-2 while using 3 feet of distance between students without increases in community spread.^{vi} Physical distance between desks should follow current public health guidance. In the absence of specific guidance, desks should be placed at least 3 feet apart, and ideally 6 feet apart. If desks are spaced less than 6 feet apart, face coverings should be strongly encouraged and adhere to public health guidance. In many jurisdictions, face coverings are mandatory for children in public settings, including schools. **Schools should weigh the benefits of strict adherence to a 6-foot spacing rule between students with the potential downside if remote learning is the only alternative.** Further, while these guidelines support the concept of cohorting, strict adherence to a specific size of student groups (eg, 10 per classroom, 15 per classroom, etc) should be discouraged, because the size of cohorts will vary depending on many factors specific to individual schools and even individual classrooms.

Given what is known about SARS-CoV-2 transmission dynamics, adults within schools should maintain a distance of 6 feet from other people as much as possible, particularly around other adult staff. For all of the below settings, physical distancing by and among adults is strongly recommended, and meetings and curriculum planning should take place virtually or outside if possible. In addition, other strategies to increase adult-adult physical distance in time and space should be implemented, such as staggered drop-offs and pickups, and drop-offs and pickups outside when weather allows. Parents should, in general, be discouraged from entering the school building. Physical barriers, such as plexiglass, should be considered in reception areas and employee workspaces where the environment does not accommodate physical distancing. Congregating in shared spaces, such as staff lounge areas, should not be allowed given the increasing evidence that these types of spaces have increased rates of transmission because of close proximity and lax adherence to masking recommendations.

The recommendations in each of the age groups below are not instructional strategies but are guidance to optimize the return of students to schools in the context of physical distancing guidelines and the developmentally appropriate implementation of the strategies.

Educational experts may have preference for one or another of the guidelines based on the instructional needs of the classes or schools in which they work.

Pre-Kindergarten (Pre-K)

In Pre-K, the relative impact of physical distancing among children is likely small based on current evidence, and it is certainly difficult to implement. Therefore, Pre-K program planning should focus on more effective risk mitigation strategies for this population. These strategies include hand and cough hygiene, infection prevention education for staff and families, adult physical distancing from one another, adults and children wearing face coverings, cohorting, and spending time outdoors.

Higher-priority strategies:

- Cohort classes to minimize crossover among children and adults within the school; the exact size of the cohort may vary, often dependent on local or state health department guidance.
- Utilize outdoor spaces when possible.
- Limit unnecessary visitors into the building.

Lower-priority strategies:

- Cloth face coverings for children in the Pre-K setting
 - Encourage families to practice wearing cloth face coverings with children while at home. Support modeling by teachers and parents.
- Reducing classmate interactions/play in Pre-K–aged children may not provide substantial COVID-19 risk reduction.

Elementary Schools

Higher-priority strategies:

- Children should wear cloth face coverings
 - Practice by children and good modeling by adults will help children be more successful at wearing cloth face coverings at younger ages.
- Desks should be placed at least 3 feet apart, and ideally 6 feet apart when feasible.
 - If this reduces the amount of time children are present in school, harm may outweigh potential benefits.
- Cohort classes to minimize crossover among children and adults within the school.

- Utilize outdoor spaces when possible.

Lower-priority strategies:

- The risk reduction of reducing class sizes in elementary school-aged children may be outweighed by the challenge of doing so.
- Similarly, reducing classmate interactions/play in elementary school-aged children may not provide enough COVID-19 risk reduction to justify potential harms.

Secondary Schools

There is likely a greater impact of physical distancing on risk reduction of COVID-19 in secondary schools than early childhood or elementary education. There are also different barriers to successful implementation of many of these measures in older age groups, as the structure of school is usually based on students changing classrooms. Suggestions for physical distancing risk mitigation strategies when feasible:

- Universal face coverings in middle and high schools, particularly when not able to maintain a 6-foot distance (students and adults).
- Planned avoidance of close physical proximity in cases of increased exhalation (singing, exercise, band); these activities are safest outdoors and spread out.
- Desks should be placed at least 3 feet apart, and ideally 6 feet apart when feasible.
- Cohort classes if possible, limit cross-over of students and teachers to the extent possible.
 - Ideas that may assist with cohorting:
 - Block schedules (with fewer classes in a given day and electives truncated to shortened time periods).
 - Eliminate use of lockers or assign them by cohort to reduce need for hallway use across multiple areas of the building.
 - This strategy would need to be implemented in conjunction with planning to ensure that students are not carrying home an unreasonable number of books on a daily basis and may vary depending on other cohorting and instructional decisions schools are making.

- Have teachers rotate into different classrooms instead of students when feasible.
- Utilize outdoor spaces when possible.
- Teachers and other adult staff should maintain a distance of 6 feet from students when possible and if not disruptive to educational process.
- Restructure elective offerings to allow small groups within one classroom. This may not be possible in a small classroom.

Special Education

Every child and adolescent with a disability is entitled to a free and appropriate education and is entitled to special education services based on their individualized education program (IEP). Students receiving special education services may be more negatively affected by distance-learning and may be disproportionately impacted by interruptions in regular education. It may not be feasible, depending on the needs of the individual child and adolescent, to adhere both to distancing guidelines and the criteria outlined in a specific IEP. Attempts to meet physical distancing guidelines should meet the needs of the individual child and may require creative solutions, often on a case-by-case basis. Additional safety measures for teachers and staff working with students with disabilities may need to be in place to ensure optimal safety for all.

Adult Staff and Educators

- Universal cloth face coverings at all times.
- Particular avoidance of close physical proximity to other adults and children.
- Desks should be placed 6 feet away from students if feasible.
- Cohort teachers with classes if possible, limit cross-over of students and teachers to the extent possible.
 - Recognizing certain teachers must cross-over to multiple classes, such as specials teachers, special educators, and secondary school teachers.
- Use plexiglass in front and around desks particularly if unable to be 6 feet away from students.

Physical Distancing in Specific Enclosed Spaces

Buses

- Encourage alternative modes of transportation for students who have other safe options, including walking or biking.
- Ideally, for students riding the bus, symptom screening would be performed prior to them being dropped off at the bus stop.
 - Having bus drivers or monitors perform these screenings is problematic, as they may face a situation in which a student screens positive yet the parent has left, and the driver would be faced with leaving the student alone or allowing the student on the bus.
- Assigned seating; if possible, assign seats by cohort (same students sit together each day).
- Tape marks showing students where to sit.
- Face coverings should be worn at all times, particularly if 6 feet distance cannot be maintained.
- Driver should be a minimum of 6 feet from students; driver must wear face covering; consider physical barrier for driver (eg, plexiglass).
- Minimize number of people on the bus at one time *within reason*.
 - Consider altering start and end times at different grades to allow fewer students on the bus at a time.
- Adults who do not need to be on the bus should not be on the bus.
- Have windows open if weather allows.
- Ensure adequate cleaning of buses between uses.

Hallways

- Consider creating one-way hallways to reduce close contact.

- Place physical guides, such as tape, on floors or sidewalks to create one-way routes.
- Where feasible, keep students in the classroom and rotate teachers instead.
- Stagger class periods by cohorts for movement between classrooms if students must move between classrooms to limit the number of students in the hallway when changing classrooms.
- Assign lockers by cohort or eliminate lockers altogether.

Playgrounds

Enforcing physical distancing in an outside playground is difficult and may not be the most effective method of risk mitigation. Emphasis should be placed on maintaining classroom cohorts of students and limiting the size of groups participating in playground time (eg, mixing of cohorts). Outdoor transmission of virus is known to be much lower than indoor transmission. If playground equipment is being used, it should be part of cleaning plans implemented by schools.

Meals/Cafeteria

School meals play an important part in addressing food security for children and adolescents and, as was observed in the early stages of the pandemic, were crucial sources of food and nutrition to children, adolescents, and their families. Regardless of whether children are participating in in-person or distance learning, school districts must continue to provide food security to all students. This may require enacting strong policies and procedures to ensure access to all students. Decisions about how to serve meals must take into account the fact that in many communities there may be more students eligible for free and reduced meals than prior to the pandemic.

- Consider having students cohorted, potentially in their classrooms, especially if students remain in their classroom throughout the day.
- Create separate lunch periods to minimize the number of students in the cafeteria at one time.
- Use unused or underutilized spaces for lunch/break times.
- Use outdoor spaces when possible.
- Create an environment that is as safe as possible from exposure to food allergens.

- Encourage children and adults to wash their hands or use hand sanitizer before and after eating.

Face Coverings and Personal Protective Equipment (PPE)

Cloth face coverings protect others if the wearer is infected with SARS-CoV-2 and is not aware. Cloth face coverings may offer some level of protection for the wearer. Evidence continues to mount on the importance of universal face coverings in interrupting the spread of SARS-CoV-2.vii,viii,ix Universal face covering use in schools for children older than 2 years is recommended. **It is important to note many children, even those with medical conditions, are able to safely and effectively wear face coverings with adequate practice and support as well as modeling from adults.** School staff and older students (those who attend middle or high school) should be able to wear cloth face coverings safely and consistently and should be encouraged to do so. Children younger than 2 years and anyone who has trouble breathing or is unconscious, incapacitated, or otherwise unable to remove a face covering without assistance should not wear cloth face coverings.

For certain populations, the use of cloth face coverings by teachers may impede the education process. These include students who are deaf or hard of hearing, students receiving speech/language services, young students in early education programs, and English language learners. Although there are products (eg, face coverings with clear panels in the front) to facilitate their use among these populations, these products may not be available in all settings.

Students and families should be taught how to properly wear (cover nose and mouth) a cloth face covering, to maintain hand hygiene when removing for meals and physical activity, and to replace and maintain (wash daily) a cloth face covering.

School health staff should be provided with appropriate medical PPE to use in health suites. This PPE should include universal N95 masks, surgical masks, gloves, disposable gowns, and face shields or other eye protection. School health staff should be aware of the [CDC guidance on infection control measures](#). [Asthma treatments using inhalers with spacers](#) should be used rather than nebulizer treatments whenever possible, because nebulizer treatments are aerosol-generating procedures, which increase risks to others. The [CDC recommends](#) that nebulizer treatments at school should be reserved for children who cannot

use or do not have access to an inhaler (with spacer or spacer with mask) for a respiratory emergency. Schools should work with families and health care providers to assist with obtaining an inhaler and spacer for students with limited access. In addition, schools should work to develop and implement asthma action plans, which may include directly observed controller medication administration in schools to promote optimal asthma control. In those rare cases in which a student can only use a nebulizer, school health staff should [wear gloves, an N95 facemask \(when available\), gown, and eye protection](#). Staff should be trained on proper donning and doffing procedures and follow the [CDC guidance](#) regarding precautions when performing this aerosol-generating procedure. Nebulizer treatments should be performed in a space that limits exposure to others and with minimal staff present. Rooms should be well-ventilated, or treatments should be performed outside. After the use of the nebulizer, the room should undergo routine [cleaning and disinfection](#).

School staff working with students who are unable to wear a cloth face covering or who are unable to manage secretions and who must be in close proximity to these students should wear a surgical mask in combination with a face shield.

Cleaning and Disinfection

The main mode of COVID-19 spread is from person to person, primarily via droplet transmission. For this reason, strategies for infection prevention should center around this form of spread, including physical distancing, face coverings, and hand hygiene. Given the challenges that may exist in children and adolescents effectively adhering to recommendations, it is critical that staff consistently set a good example for students by modeling behaviors around physical distancing, face coverings, and hand hygiene. Infection via fomites is less likely. However, because the virus may survive on certain surfaces for some time, it is possible to get infected after touching a virus contaminated surface and then touching the mouth, eyes, or nose. Frequent handwashing as a modality of containment is vital.

The additional cleaning requirements because of the COVID-19 pandemic will require additional resources for schools both in supplies and potential in staffing. Cleaning should be performed per established protocols followed by disinfection when appropriate. Normal cleaning with soap and water decreases the viral load and optimizes the efficacy of disinfectants. When using disinfectants, the manufacturers' instructions must be followed, including duration of dwell time, use of PPE if indicated, and proper ventilation. The use of the Environmental Protection Agency (EPA)-approved disinfectants against COVID-19 is

recommended ([EPA List N](#)). When possible, only products labeled as [safe for humans and the environment](#) (eg, Safer or Designed for the Environment), containing active ingredients such as hydrogen peroxide, ethanol, citric acid, should be selected from this list, because they are less toxic, are not strong respiratory irritants or asthma triggers, and have no known carcinogenic, reproductive, or developmental effects.

When EPA-approved disinfectants are not available, alternative disinfectants such as diluted bleach or 70% alcohol solutions can be used. Children should not be present when disinfectants are in use and should not participate in disinfecting activities. Most of these products are not safe for use by children, whose “hand-to-mouth” behaviors and frequent touching of their face and eyes put them at higher risk for toxic exposures. If disinfection is needed while children are in the classroom, adequate ventilation should be in place and nonirritating products should be used. Disinfectants such as bleach and those containing quaternary ammonium compounds or “Quats” should not be used when children and adolescents are present, because these are known respiratory irritants.

In general, elimination of high-touch surfaces is preferable to frequent cleaning. For example, classroom doors can be left open rather than having students open the door when entering and leaving the classroom, or the door can be closed once all students have entered followed by hand sanitizing. As part of increasing social distance between students and surfaces requiring regular cleaning, schools could also consider eliminating the use of lockers, particularly if they are located in shared spaces or hallways, making physical distancing more challenging. If schools decide to use this strategy, it should be done within the context of ensuring that students are not forced to transport unreasonable numbers of books back and forth from school on a regular basis.

When elimination of use of high-touch surfaces is not possible, surfaces that are used frequently, such as drinking fountains, door handles, sinks and faucet handles, etc, should be cleaned and disinfected at least daily and as often as possible. Bathrooms, in particular, should receive frequent cleaning and disinfection. Shared equipment including computer equipment, keyboards, art supplies, and play or gym equipment should also be disinfected frequently. Hand washing should be promoted before and after touching shared equipment. Computer keyboard covers can be used to facilitate cleaning between users. [Routine cleaning practices](#) should be used for indoor areas that have not been used for 7 or more days or outdoor equipment. Surfaces that are not high-touch, such as bookcases, cabinets, wall boards, or drapes should be cleaned following standard protocol. The same applies to floors or carpeted areas.

Outdoor playgrounds/natural play areas only need routine maintenance, and hand hygiene should be emphasized before and after use of these spaces. Outdoor play equipment with high-touch surfaces, such as railings, handles, etc, should be cleaned and disinfected regularly if used continuously.

Alternative Disinfection Methods

The efficacy of [alternative disinfection methods](#), such as ultrasonic waves, high-intensity UV radiation, and LED blue light against COVID-19 virus is not known. The EPA does not routinely review the safety or efficacy of pesticidal devices, such as UV lights, LED lights, or ultrasonic devices. Therefore, the EPA cannot confirm whether, or under what circumstances, such products might be effective against the spread of SARS-CoV-2.x

Testing and Screening

Virologic testing is an important part of the overall public health strategy to limit the spread of COVID-19. Virologic testing detects the viral RNA from a respiratory (usually nasal) swab specimen. [The CDC does not recommend universal testing of students and staff](#). Testing all students for acute SARS-CoV-2 infection prior to the start of school is not feasible in most settings at this time. Even in places where this is possible, it is not clear that such testing would reduce the likelihood of spread within schools. It is important to recognize that virologic testing only shows whether a person is infected at that specific moment in time. It is also possible that the nasal swab virologic test result can be negative during the early incubation period of the infection. So, although a negative virologic test result is reassuring, it does not mean that the student or school staff member is not going to subsequently develop COVID-19. Stated another way, a student who is negative for COVID-19 on the first day of school may not remain negative throughout the school year.

A student or school staff member who has had a known exposure to COVID-19 (eg, close contact –within 6 feet for at least 15 minutes – with an individual with laboratory-confirmed SARS-CoV-2 infection or illness consistent with COVID-19), according to [CDC guidelines](#), should self-quarantine for 14 days from the last exposure. In every case, local health officials should make the determination on quarantine and contact tracing. However, depending on current community viral case rates, local health authorities may make differing recommendations regarding contact tracing and/or school exclusion or school closure.

Another type of testing is serologic blood testing for antibodies to SARS-CoV-2. At the current time, serologic testing should not be used for individual decision-making and has no place in considerations for entrance to or exclusion from school. [CDC guidance](#) regarding antibody testing for COVID-19 is that serologic test results should not be used to make decisions about grouping people residing in or being admitted to congregate settings, such as schools, dormitories, or correctional facilities. Additionally, serologic test results should not be used to make decisions about returning people to the workplace. The CDC states that serologic testing should not be used to determine immune status in individuals until the presence, durability, and duration of immunity is established. The AAP recommends this guidance be applied to school settings as well.

Schools should have a policy regarding symptom screening for teachers and staff and what to do if a student or school staff member becomes sick with symptoms. Temperature checks and symptom screening are a frequent part of many reopening processes to identify symptomatic persons to exclude them from entering buildings and business establishments. The list of symptoms of COVID-19 infection has grown since the start of the pandemic and the manifestations of COVID-19 infection in children, although similar, is often not the same as that for adults. **First and foremost, parents should be instructed to keep their child at home if they are ill, and staff members should stay home if they are ill.** Any student or staff member with a fever of 100.4 degrees or greater or symptoms of possible COVID-19 virus infection should not be present in school. **School policies regarding temperature screening and temperature checks must balance the practicality of performing these screening procedures for large numbers of students and staff with the information known about how children manifest and transmit COVID-19 infection, the risk of transmission in schools, and the possible lost instructional time to conduct the screenings.** At this time, the [CDC currently does not recommend universally screening students](#) at school, because screening may fail to identify a student who has a SARS-CoV-2 infection and may overidentify students with different common childhood illnesses. Schools should develop plans for rapid response to a student or staff member with fever who is in the school regardless of the implementation of temperature checks or symptom screening prior to entering the school building.

In lieu of temperature checks and symptom screening being performed after arrival to school, **methods to allow parent performing and reporting of symptoms and temperature checks performed at home may be considered.** Resources and time may necessitate this strategy at most schools. The epidemiology of disease in children along with evidence of the utility of temperature screenings in health systems may further justify this

approach. Procedures using texting apps, phone systems, or online reporting rely on parent report and may be most practical but possibly unreliable, depending on individual family's ability to use these communication processes, especially if not made available in their primary language or lack of electronic forms of communication. School nurses or nurse aides should be equipped to measure temperatures for any student or staff member who may become ill during the school day and should have an identified area to separate or [isolate students](#) who may have COVID-19 symptoms.

COVID-19 manifests similarly to other respiratory illness in children. Although children manifest many of the same symptoms of COVID-19 infection as adults, some differences are noteworthy. [According to the CDC](#), children may be less likely to have fever, may be less likely to present with fever as an initial symptom, and may have only gastrointestinal tract symptoms. A student or staff member excluded because of symptoms of COVID-19 should contact their health care provider to discuss testing and medical care. In the absence of testing, students or staff should follow local health department guidance for exclusion.

Ventilation

The primary mode of transmission of SARS-CoV-2 appears to be by droplet transmission by people in close proximity. There are emerging studies on the possible role of airborne transmission. Although it is possible that there may be this type of transmission in some settings, the preponderance of evidence at this time suggests that this is not a primary mode of transmission. For example, the reproductive number of SARS-CoV-2 is in the range of other viruses known to be transmitted primarily by respiratory droplets, such as influenza. Further, simple face masks appear to be quite effective for decreasing the likelihood of transmission of SARS-CoV-2, in contrast with known airborne pathogens such as measles. With this in mind, mitigation efforts should focus on prevention of droplet transmission. Proper ventilation, however, does have a role in preventing the spread of any respiratory pathogen. Heating, air conditioning, and ventilation (HVAC) systems should be inspected for optimal functioning, filters should be within their service life, and MERV-13 (minimum efficiency reporting value) efficiency filtration should be used, if the equipment allows.^{xi,xii} Demand-controlled ventilation (DVC) should be disabled when possible, and the system should run continuously to improve air exchanges in the school building.

Other Considerations

On-site School-Based Health Services

On-site school health services, including school-based health centers, should be supported if available, to complement the pediatric medical home and to provide pediatric acute, chronic, and preventive care. Collaboration with [school nurses](#) will be essential, and school districts should involve school health services staff early in the planning phase for reopening and consider collaborative strategies that address and prioritize immunizations and other needed health services for students, including behavioral health, vision screening, hearing, and reproductive health services.

Vision Screening

Vision screening practices should continue in school whenever possible. Vision screening serves to identify children who may otherwise have no outward symptoms of blurred vision or subtle ocular abnormalities that, if untreated, may lead to permanent vision loss or impaired academic performance in school. Personal prevention practices and environmental [cleaning and disinfection](#) are important principles to follow during vision screening, along with any additional guidelines from local health authorities.

Hearing Screening

Safe hearing screening practices should continue in schools whenever possible. School screening programs for hearing are critical in identifying children who have hearing loss as soon as possible so that reversible causes can be treated and hearing restored. Children with permanent or progressive hearing loss will be habilitated with hearing aids to prevent impaired academic performance in the future. Personal prevention practices and environmental [cleaning and disinfection](#) are important principles to follow during hearing screening, along with any additional guidelines from local health authorities.

Education

The impacts of lost instructional time and social emotional development on children and adolescents should be anticipated, and schools will need to be prepared to adjust curricula and instructional practices accordingly without the expectation that all lost academic progress can be caught up. Plans to make up for lost academic progress because of school closures and distress associated with lost academic progress and the pandemic in general should be balanced by a recognition of the likely continued distress of educators and students that will persist when schools reopen. If the academic expectations are unrealistic, school will likely

become a source of further distress for students (and educators) at a time when they need additional support. It is also critical to maintain a balanced curriculum with continued physical education and other learning experiences rather than an exclusive emphasis on core subject areas. In addition, continued improvement of remote learning practices should be encouraged, and further funding should be provided by federal and local governments to provide further support (eg, universal free broadband internet).

Students with Disabilities

The impact of loss of instructional time and related services, including mental health services as well as occupational, physical, and speech/language therapy during the period of school closures is significant for students with disabilities. All students, but especially those with disabilities, may have more difficulty with the social and emotional aspects of transitioning out of and back into the school setting. As schools prepare for reopening, school personnel should develop a plan to ensure a review of each child and adolescent with an IEP to determine the needs for compensatory education to adjust for lost instructional time as well as other related services. In addition, schools can expect a backlog in evaluations; therefore, plans to prioritize those for new referrals as opposed to re-evaluations will be important. Many school districts require adequate instructional effort before determining eligibility for special education services. However, virtual instruction or lack of instruction should not be reasons to avoid starting services such as response-to-intervention (RTI) services, even if a final eligibility determination is postponed.

Behavioral Health/Emotional Support for Children and Adolescents

Schools should anticipate and be prepared to address a wide range of mental health needs of children and staff when schools reopen. Preparation for [infection control](#) is vital and admittedly complex during an evolving pandemic. But the emotional impact of the pandemic, grief because of loss, financial/employment concerns, social isolation, and growing concerns about systemic racial inequity — coupled with prolonged limited access to critical school-based mental health services and the support and assistance of school professionals — demands careful attention and planning as well. Schools should be prepared to adopt an approach for mental health support, and just like other areas, supporting mental health will require additional funding to ensure adequate staffing and the training of those staff to address the needs of the students and staff in the schools.

Schools should consider providing training to classroom teachers and other educators on how to talk to and support children during and after the COVID-19 pandemic. Students requiring mental health support should be referred to school mental health professionals.

Suicide is the second leading cause of death among adolescents or youth 10 to 24 years of age in the United States. In the event distance learning is needed, schools should develop mechanisms to evaluate youth remotely if concerns are voiced by educators or family members and should be establishing policies, including referral mechanisms for students believed to be in need of in-person evaluation, even before schools reopen.

School mental health professionals should be involved in shaping messages to students and families about the response to the pandemic. Fear-based messages widely used to encourage strict physical distancing may cause problems when schools reopen, because the risk of exposure to COVID-19 may be mitigated but not eliminated. Communicating effectively is especially critical, given potential adaptations in plans for in-person or distance learning that need to occur during the school year because of changes in community transmission of SARS-CoV-2.

When schools do reopen, plans should already be in place for outreach to families whose students do not return for various reasons. This outreach is especially critical, given the high likelihood of separation anxiety and agoraphobia in students. Students may have difficulty with the social and emotional aspects of transitioning back into the school setting, especially given the unfamiliarity with the changed school environment and experience. Special considerations are warranted for students with pre-existing anxiety, depression, and other mental health conditions; children with a prior history of trauma or loss; and students in early education who may be particularly sensitive to disruptions in routine and caregivers. Students facing other challenges, such as poverty, food insecurity, and homelessness, and those subjected to ongoing racial inequities may benefit from additional support and assistance.

Schools need to incorporate academic accommodations and supports for all students who may still be having difficulty concentrating or learning new information because of stress or family situations that are compounded by the pandemic. It is important that school personnel do not anticipate or attempt to catch up for lost academic time through accelerating curriculum delivery at a time when students and educators may find it difficult to even return to baseline rates. These expectations should be communicated to educators, students, and family members so that school does not become a source of further distress.

Mental Health of Staff

The personal impact on educators and other school staff should be recognized. In the same way that students are going to need support to effectively return to school and to be prepared to be ready to process the information they are being taught, teachers cannot be expected to be successful at teaching children without having their mental health needs supported. The strain on teachers this year as they have been asked to teach differently while they support their own needs and those of their families has been significant, and they will be bringing that stress back to school as schools reopen. Resources such as Employee Assistance Programs and other means to provide support and mental health services should be established prior to reopening. The individual needs and concerns of school professionals should be addressed with accommodations made as needed (eg, for a classroom educator who is pregnant, has a medical condition that confers a higher risk of serious illness with COVID-19, resides with a family member who is at higher risk, or has a mental health condition that compromises the ability to cope with the additional stress).

Although schools should be prepared to be agile to meet evolving needs and respond to increasing knowledge related to the pandemic and may need to institute partial or complete closures when the public health need requires, school leaders should recognize that staff, students, and families will benefit from sufficient time to understand and adjust to changes in routine and practices. During a crisis, people benefit from clear and regular communication from a trusted source of information and the opportunity to dialogue about concerns and needs and feel they are able to contribute in some way to the decision-making process. Change is more difficult in the context of crisis and when predictability is already severely compromised.

Food Insecurity

In 2018, 11.8 million children and adolescents (1 in 7) in the United States lived in a food-insecure household.^{xiii} The coronavirus pandemic has led to increased unemployment and poverty for America's families, which will likely increase even further the number of families who experience food insecurity.^{xiv} School re-entry planning must consider the many children and adolescents who experience food insecurity already (especially at-risk and low-income populations) and who will have limited access to routine meals through the school district if schools remain closed. The short- and long-term effects of food insecurity in children and adolescents are profound.^{xv} In the early months of the pandemic, many families were not able

to pick up the food provided through schools despite the school's attempt to reach all families. Given low participation in pick-up food programs this spring in some school districts, school districts should coordinate meal delivery in accessible locations and consider providing multiple days' worth of meals to reduce the burden on families. **Plans should be made prior to the start of the school year for how students participating in free- and reduced- meal programs will receive food in the event of a school closure or if they are excluded from school because of illness or SARS-CoV-2 infection.**

Immunizations

Existing school immunization requirements should be maintained and not deferred because of the current pandemic. In addition, **although influenza vaccination is generally not required for school attendance, in the coming academic year, it should be highly encouraged for all students and staff.** The symptoms of influenza and SARS-CoV-2 infection are similar and taking steps to prevent influenza will decrease the incidence of disease in schools, and the related lost educational time and resources needed to handle such situations by school personnel and families. School districts should consider requiring influenza vaccination for all staff members.

Pediatricians should work with schools and local public health authorities to promote childhood vaccination messaging well before the start of the school year. It is vital that all children receive recommend vaccinations on time and get caught up if they are behind as a result of the pandemic. The capacity of the health care system to support increased demand for vaccinations should be addressed through a multifaceted collaborative and coordinated approach among all child-serving agencies including schools.

Organized Activities

It is likely that sporting events, practices, and conditioning sessions as well as other extracurricular activities will be limited in many locations. The [AAP Interim Guidance on Return to Sports](#) helps pediatricians inform families on how best to ensure safety when considering a return to sports participation. Preparticipation evaluations should be conducted in alignment with the [AAP Preparticipation Physical Evaluation Monograph, 5th ed](#), and state and local guidance.

Additional Information

- [Guidance Related to Childcare During COVID-19](#)
- [Cloth Face Coverings](#)
- [Testing Guidance](#)
- [COVID-19 Interim Guidance: Return to Sports](#)
- Information for Parents on HealthyChildren.org: [Returning to School During COVID-19](#)
- [CDC COVID-19 Resources](#)
- [Coalition to Support Grieving Students](#)
- [Using Social Stories to Support People with I/DD During the COVID-19 Emergency](#)
- [Social Stories for Young and Old on COVID-19](#)

References



Interim Guidance Disclaimer: The COVID-19 clinical interim guidance provided here has been updated based on current evidence and information available at the time of publishing. Guidance will be regularly reviewed with regards to the evolving nature of the pandemic and emerging evidence. All interim guidance will be presumed to expire on June 30, 2021 unless otherwise specified.

Last Updated 08/19/2020

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EXHIBIT F
TO DECLARATION OF
TIMOTHY P. FLANIGAN, MD
(EXHIBIT 4)



Department of Health

INTERIM GUIDANCE FOR IN-PERSON INSTRUCTION AT PRE-K TO GRADE 12 SCHOOLS DURING THE COVID-19 PUBLIC HEALTH EMERGENCY

When you have read this document, you can affirm at the bottom.

As of August 26, 2020

Purpose

This Interim Guidance for In-Person Instruction at Pre-K to Grade 12 Schools during the COVID-19 Public Health Emergency ("Interim COVID-19 Guidance for Schools") was created to provide all elementary (including pre-kindergarten), middle, and high schools, as well as their employees, contractors, students, and parents/legal guardians of students with precautions to help protect against the spread of COVID-19 for schools that are authorized to provide in-person instruction in the 2020-2021 school year.

This guidance is intended to address all types of public and private (both secular and non-secular) elementary (including pre-kindergarten), middle, and high schools. In addition to affirming to understand and meet the requirements described herein, school districts, boards of cooperative educational services (BOCES), charter schools, and private schools must develop individual plans for reopening and operating during the COVID-19 public health emergency. Each plan must meet the minimum standards set forth in this guidance and reflect engagement with school stakeholders and community members, including but not limited to administrators, faculty, staff, students, parents/legal guardians of students, local health departments, local health care providers, and, where appropriate, affiliated organizations (e.g., union, alumni, and/or community-based groups). Specifically, each school district, BOCES, charter school, and private school must develop and submit to the New York State Department of Health (DOH) and the New York State Education Department (NYSED), or the State University of New York (SUNY) for charter schools authorized by SUNY, a plan that, at minimum, covers:

- (1) Reopening of school facilities for in-person instruction,
- (2) Monitoring of health conditions,
- (3) Containment of potential transmission of the 2019 novel coronavirus (COVID-19), and
- (4) Closure of school facilities and in-person instruction, if necessitated by widespread virus transmission.

Core Health and Safety Principles and Definitions

- **Responsible Parties:** Responsible Parties shall be responsible for developing the plan, affirming to having read and adhere to this guidance, and meeting the standards set forth herein. For school districts and BOCES, the district superintendent, or another party as may be designated by the district superintendent, and for private and charter schools, the head of school, or another party as may be designated by the head of school, is the Responsible Parties. The designated party can be an individual or group of individuals responsible for the operations of the school or schools.
- **Face Coverings:** Responsible Parties must maintain protocols and procedures for students, faculty, staff, and other individuals to ensure appropriate personal protective equipment (PPE) is used to protect against the transmission of the COVID-19 virus when on school grounds and in school facilities. Specifically, appropriate PPE means, at least, an acceptable face covering, which is strongly

recommended to be worn by all individuals at all times but is required to be worn any time or place that individuals cannot maintain appropriate social distancing. However, if face coverings are to be worn by all individuals at all times, Responsible Parties should allow students to remove their face covering during meals, instruction, and for short breaks so long as they maintain appropriate social distance. Acceptable face coverings include but are not limited to cloth-based face coverings (e.g., homemade sewn, quick cut, bandana), and surgical masks that cover both the mouth and nose.

- **Social Distancing:** Responsible Parties must maintain protocols and procedures for students, faculty, and staff to ensure appropriate social distancing to protect against the transmission of the COVID-19 virus when on school grounds and in school facilities. Specifically, appropriate social distancing means six feet of space in all directions between individuals or use of appropriate physical barriers between individuals that do not adversely affect air flow, heating, cooling, or ventilation, or otherwise present a health or safety risk. If used, physical barriers must be put in place in accordance with United States Department of Labor's Occupational Safety and Health Administration (OSHA) guidelines, and may include strip curtains, cubicle walls, code compliant materials, or other impermeable divider or partition.
- **Spaces:** To reduce social density, Responsible Parties should consider and assess additional and/or alternate indoor space(s) that may be repurposed for instruction or other required purposes in support of in-person instruction within the school facility, school grounds, municipal facilities, municipal grounds, or community (e.g., community centers), as well as outdoor space(s) where health and safety conditions (e.g., allergies, asthma) allow for such potential usage.
- **In-Person Instruction:** To ensure equity in education, Responsible Parties should prioritize efforts to return all students to in-person instruction at this time. However, based on the dynamic nature of local community transmission of the COVID-19 virus, a phased-in approach or hybrid model combining in-person instruction and remote/distance learning may be necessary at various times through the 2020-2021 school year. In planning for these approaches and models, school plans should indicate if certain students will be prioritized to return to in-person instruction first or more frequently based on educational or other needs (e.g., early grades, students with disabilities, English language learners), given requirements for equity, capacity, social distancing, PPE, feasibility, and learning considerations.
- **Cohorts:** Responsible Parties should "cohort" students, to the extent practicable, to limit potential exposure to the COVID-19 virus. Cohorts, particularly for younger students, are self-contained, pre-assigned groups of students with reasonable group size limits set forth by the Responsible Parties in their plans. Responsible Parties should enact measures to prevent intermingling between cohorts, to the extent possible (e.g., separation by appropriate social distancing, particularly if there are multiple cohorts in one area). Responsible Parties should make reasonable efforts to ensure that cohorts are fixed – meaning contain the same students – for the duration of the COVID-19 public health emergency. Faculty may instruct more than one cohort so long as appropriate social distancing is maintained.
- **Screening:** Responsible Parties must implement mandatory health screenings, including temperature checks, of students, faculty, staff, and, where applicable, contractors, vendors, and visitors to identify any individuals who may have COVID-19 or who may have been exposed to the COVID-19 virus. Specifically, all individuals must have their temperature checked each day. If an individual presents a temperature of greater than 100.0°F, the individual must be denied entry into the facility or sent directly to a dedicated area prior to being picked up or otherwise sent home. Responsible Parties must also use a daily screening questionnaire for faculty and staff reporting to school; and periodically use a questionnaire for students, particularly younger students, who may require the assistance of their parent/legal guardian to answer. Remote health screening (e.g., by electronic survey, digital application, or telephone, which may involve the parent/legal guardian) before any individual reports to school, is strongly advised.

- **Transportation:** Consistent with State-issued public transit guidance, Responsible Parties must develop protocols and procedures, which include that individuals must wear acceptable face coverings at all times on school buses (e.g., entering, exiting, and seated), and that individuals should maintain appropriate social distancing, unless they are members of the same household. Responsible Parties should encourage parents/legal guardians to drop off or walk students to school to reduce density on buses.
- **Food Services:** Responsible Parties must continue to provide school breakfast and/or lunch to students who were previously receiving school meals, both on site and remote. For students on site, Responsible Parties must provide meals while maintaining appropriate social distancing between students. Students do not need to wear face coverings when seated and eating so long as they are appropriately socially distanced. Responsible Parties may serve meals in alternate areas (e.g., classrooms) or staggered meal periods to ensure social distancing and proper cleaning and disinfection between students.
- **Ventilation:** Responsible Parties should increase ventilation with outdoor air to the greatest extent possible (e.g., opening windows and doors) while maintaining health and safety protocols, particularly for younger students.
- **Hygiene, Cleaning, and Disinfection:** Responsible Parties must adhere to and promote hygiene, cleaning, and disinfection guidance set forth by DOH and the Centers for Disease Control and Prevention (CDC). Responsible Parties must train all students, faculty, and staff on proper hand and respiratory hygiene. Responsible Parties must maintain logs that include the date, time, and scope of cleaning and disinfection, as well as identify cleaning and disinfection frequency for each facility and area type and assign responsibility to staff.
- **Contact Tracing:** Responsible Parties must notify the state and local health department immediately upon being informed of any positive COVID-19 diagnostic test result by an individual within school facilities or on school grounds, including students, faculty, staff, and visitors. In the case of an individual testing positive, Responsible Parties must develop and maintain plans to support local health departments in tracing all contacts of the individual, in accordance with the protocols, training, and tools provided through the New York State Contact Tracing Program. Confidentiality must be maintained as required by federal and state law and regulations. Responsible Parties must cooperate with all state and local health department contact tracing, isolation, and quarantine efforts.
- **Return to School:** Responsible Parties must establish protocols and procedures, in consultation with the local health department(s), about the requirements for determining when individuals, particularly students, who screened positive for COVID-19 symptoms can return to the in-person learning environment at school. This return to school protocol shall include, at minimum, documentation from a health care provider following evaluation, negative COVID-19 diagnostic test result, and symptom resolution, or if COVID-19 positive, release from isolation. Responsible Parties should refer to DOH's "Interim Guidance for Public and Private Employees Returning to Work Following COVID-19 Infection or Exposure" regarding protocols and policies for faculty and staff seeking to return to work after a suspected or confirmed case of COVID-19 or after the faculty or staff member had close or proximate contact with a person with COVID-19.

Plan Requirements

Reopening of in-person instruction includes protocols and procedures for restarting school operations including students, faculty, and staff returning to in-person instruction. At a minimum, plans must incorporate the following:

- **Capacity:** Phasing and quantity of students, faculty, and staff allowed to return in-person, considering factors such as ability to maintain appropriate social distance, personal protective equipment (PPE) availability, local medical capacity, and availability of safe transportation;

- **Social Distancing:** Protocols and procedures for students, faculty, and staff to ensure appropriate social distancing when on school grounds and in school facilities;
- **PPE and Face Coverings:** Protocols and procedures for students, faculty, staff, and other individuals to ensure appropriate PPE is used to protect against the transmission of the COVID-19 virus when on school grounds and in school facilities. Plans for all students, faculty, and staff to have the required PPE (i.e., acceptable face coverings) before entering school facilities, grounds, or any other space owned or administered by the school or school district (e.g., school buses);
- **Operational Activity:** Determinations on how classes, shared spaces, and activities may be adapted in various phases of learning and operations (e.g., identify which, if any, students will be offered alternate approaches, such as alternative schedules or hybrids of in-person and remote learning; how additional and alternative – school and non-school – spaces can be used for, or in support of, in-person instruction; how such schedules could be administered to create overlap for students from the same household; how shared spaces, such as cafeterias, libraries, playgrounds, and gymnasiums, will be modified and used, if and how cohorts will be implemented). Policies regarding field trips, special congregate events, and visitors considering risks for COVID-19 transmission, as well as protocols and procedures for social distancing, PPE usage, and cleaning and disinfection, which may include conducting virtual events;
- **Restart Operations:** Plans to safely reopen facilities and grounds, such as cleaning and disinfection, and restarting building ventilation, water systems, and other key facility components, as applicable;
- **Hygiene, Cleaning, and Disinfection:** Protocols and procedures for school-wide cleaning and disinfection of classrooms, restrooms, cafeterias, libraries, playgrounds, school buses, and all other school facilities, as well as training and promotion of hand and respiratory hygiene among all individuals in school facilities and on school grounds;
- **Extracurriculars:** Policies regarding extracurricular programs and which activities will be allowed, considering social distancing, PPE usage, and cleaning and disinfection, as well as risk of COVID-19 transmission (e.g., interscholastic sports, assemblies, and other gatherings). Policies should consider how to maintain cohorts, if applicable, or members of the same household. Responsible Parties must refer to DOH's "Interim Guidance for Sports and Recreation During the COVID-19 Public Health Emergency" to assist in development of these policies and the conduct of school-sponsored sports. Further, lower- and moderate-risk sports (e.g., tennis, soccer, cross country, field hockey, and swimming) may practice and play, effective September 21, 2020. However, travel for practice or play is prohibited outside of the school's region or contiguous regions/counties until October 19, 2020. Higher-risk sports (e.g., football, wrestling, rugby, hockey, and volleyball) may practice, effective September 21, 2020, but not play until authorized at a later date, but no later than December 31, 2020; in accordance with the State-issued guidance, such practices are limited to individual or group, no- to low-contact training (e.g., skills development) whereby contact between players may only be incidental and any activities that are specifically designed to promote close physical contact are prohibited. If school is closed for in-person education during the school year due to an increase in confirmed COVID-19 cases, school-sponsored sports must be suspended until in-person education is resumed; provided, however, that this restriction does not apply to schools that are conducting only remote instruction.
- **Before and Aftercare:** Policies regarding before and aftercare programs, considering social distancing, PPE usage, and cleaning and disinfection requirements, as well as risk of COVID-19 transmission. Policies should consider how to maintain cohorts, if applicable, or group members of the same household;
- **Vulnerable Populations:** Policies regarding vulnerable populations, including students, faculty and staff who are at increased risk for severe COVID-19 illness, and individuals who may not feel comfortable returning to an in-person educational environment, to allow them to safely participate in educational activities and, where appropriate, accommodate their specific circumstances. These

accommodations may include but are not limited to remote learning or telework, modified educational or work settings, or providing additional PPE to individuals with underlying health conditions. Responsible Parties must also identify and describe any modifications to social distancing or PPE that may be necessary for certain student or staff populations, including individuals who have hearing impairment or loss, students receiving language services, and young students in early education programs, ensuring that any modifications minimize COVID-19 exposure risk for students, faculty, and staff, to the greatest extent possible;

- **Transportation:** Consistent with State-issued public transit guidance, protocols and procedures, which include that individuals must wear acceptable face coverings at all times on school buses (e.g., entering, exiting, and seated), and that individuals should maintain appropriate social distancing, unless they are members of the same household. Protocols and procedures should include how school buses will be adapted to keep students and staff safe (e.g., how face coverings will be provided to students in need, how members of the same household will be seated together, how social distancing will be conducted on buses, whether bus schedules will be adapted to accommodate reduced capacity, whether any health screening will be conducted at home before students board buses, how parents/legal guardians will be encouraged to drop off or walk students to reduce density on buses);
- **Food Services:** Protocols and procedures for onsite and remote food services for students, considering appropriate social distancing and any modifications to service that may be necessary (e.g., providing meals in a combination of classrooms and cafeterias, staggering meal periods). Measures to protect students with food allergies if providing meals in spaces outside the cafeteria. Protocols and procedures must also include how students will perform hand hygiene before and after eating, how appropriate hand hygiene will be promoted, and how sharing of food and beverages will be discouraged. Additionally, protocols and procedures must account for cleaning and disinfection prior to the next group of students arriving for meals, if served in the same common area (e.g., cafeteria);
- **Mental Health, Behavioral, and Emotional Support Services and Programs:** Available resources and referrals to address mental health, behavioral, and emotional needs of students, faculty, and staff when school reopens for in-person instruction (e.g., how they will identify and support students having difficulty with transitioning back into the school setting, especially given the changed school environment). Any training for faculty and staff on how to talk with, and support, students during and after the ongoing COVID-19 public health emergency, as well as information on developing coping and resilience skills for students, faculty, and staff; and
- **Communication:** Communications plans for students, parents/legal guardians of students, faculty, staff and visitors that includes applicable instructions, training, signage, and a consistent means to provide individuals with information. Plans should describe how schools will communicate with students and families about preparing for the upcoming year, which should include adapting to social distancing requirements, properly wearing face coverings, and proper hand and respiratory hygiene. Consider developing webpages, text and email groups, and social media to disseminate information. Schools should develop communication plans in multiple languages, as necessary.

Monitoring includes protocols and procedures to track health conditions at schools. At a minimum, plans must incorporate the following:

- **Screening:** Protocols and procedures for mandatory health screenings, including temperature checks, of students, faculty, staff, and, where applicable, contractors, vendors, and visitors to identify any individuals who may have COVID-19 or who may have been exposed to the COVID-19 virus. Responsible Parties should consider limiting the number of visitors permitted on school grounds or in school facilities, and, if visitors are allowed, screening of such visitors;
- **Testing Protocols:** Process for the provision or referral of diagnostic testing for students, faculty, and staff for COVID-19, in consultation with local health department officials, when needed, which should

include plans for testing of symptomatic individuals, close contacts of COVID-19 suspected or confirmed individuals, and individuals with recent international travel or travel within a state with widespread transmission of COVID-19 as designated through the New York State Travel Advisory, before allowing such individuals to return to in-person to the school;

- **Testing Responsibility:** Identification of who in the community is responsible for referring, sourcing, and administering testing (e.g., local health department testing site, physician offices, hospital system), particularly in the event that large-scale testing at the school is needed; and
- **Early Warning Signs:** Defined metrics that will serve as early warning signs that positive COVID-19 cases may be increasing beyond an acceptable level, as established by state and local health departments; define and deploy method(s) to monitor against such metrics.

Containment includes protocols and procedures for how to respond to positive or presumed-positive cases, as well as preventative practices. At a minimum, plans must incorporate the following:

- **School Health Offices:** Protocols for safely caring for a student, faculty, or staff member if they develop symptoms of COVID-19 during the school day;
- **Isolation:** Procedures to isolate individuals who screen positive upon arrival, or symptomatic individuals should they become symptomatic while at school, providing appropriate PPE for school health office staff caring for the symptomatic individual. Protocols for safe transportation, including pick-up arrangements, if applicable, for symptomatic students, faculty, and staff;
- **Collection:** Protocols for how parents or legal guardians should pick up their student with instructions that the student must be seen by a health care provider;
- **Infected Individuals:** Requirements that persons who have tested positive complete isolation and have recovered, and will not transmit COVID-19 when returning to in-person learning. Discharge from isolation and return to school will be conducted in coordination with the local health department.
- **Exposed Individuals:** Requirements that individuals who were exposed to the COVID-19 virus complete quarantine and have not developed symptoms before returning to in-person learning. Discharge from quarantine and return to school will be conducted in coordination with the local health department;
- **Hygiene, Cleaning, and Disinfection:** Adherence to, and promotion of, hygiene, cleaning, and disinfection guidance set forth by DOH and CDC, including strategies for cleaning and disinfection of exposed areas and appropriate notification to occupants of such areas;
- **Contact Tracing:** Plans to support local health departments in contact tracing efforts using the protocols, training, and tools provided through the New York State Contact Tracing Program – an initiative between the Department of Health, Bloomberg Philanthropies, Johns Hopkins Bloomberg School of Public Health, and Vital Strategies; and
- **Communication:** Plans to share protocols and safety measures taken by the school with all relevant parties including parents/legal guardians, faculty, staff, students and the local community.

Closure includes contingency plans, protocols, and procedures for decreasing the scale or scope of in-person education, and/or closing the school. At a minimum, plans must incorporate the following:

- **Closure triggers:** Identification of the conditions that may warrant reducing in-person education or closing the school, in consultation with state and local health departments, and plan for an orderly closure;
- **Operational Activity:** Determination of which operations will be decreased, or ceased and which operations will be conducted remotely; include process to conduct orderly closures which may include phasing, milestones, and involvement of key personnel; and

- **Communication:** Plan to communicate internally and externally throughout the closure process.

State-Issued Guidance and Minimum Standards

Pre-K through Grade 12 schools involve a variety of activities depending on their specific educational and extracurricular programs and services, and, as such, should reference relevant “industry-specific” guidelines provided by DOH – and available on the [New York Forward](#) website – for operations of food services, office workspaces, transportation, and other activities, as applicable. Specifically, operations of cafeterias and other food services must operate in accordance with “[Interim Guidance for Food Services during the COVID-19 Public Health Emergency](#)” with additional precautions for students that are contained herein, such as social distancing between students or cohorts of students. Administrative functions must operate in accordance with, “[Interim Guidance for Office-Based Work during the COVID-19 Public Health Emergency](#).” Transportation services administered by the school must operate in accordance with “[Interim Guidance for Public Transportation Activities during the COVID-19 Public Health Emergency](#)” with additional precautions that are contained herein. Interscholastic athletics must follow DOH’s “[Interim Guidance for Sports and Recreation During the COVID-19 Public Health Emergency](#)” for the conduct of school-sponsored sports. Specifically, lower- and moderate-risk sports (e.g., tennis, soccer, cross country, field hockey, and swimming) may practice and play, effective September 21, 2020. However, travel for practice or play is prohibited outside of the school’s region or contiguous regions/counties until October 19, 2020. Higher-risk sports (e.g., football, wrestling, rugby, hockey, and volleyball) may practice, effective September 21, 2020, but not play until authorized at a later date, but no later than December 31, 2020; in accordance with the State-issued guidance, such practices are limited to individual or group, no- to low-contact training (e.g., skills development) whereby contact between players may only be incidental and any activities that are specifically designed to promote close physical contact are prohibited. If school is closed for in-person education during the school year due to an increase in confirmed COVID-19 cases, school-sponsored sports must be suspended until in-person education is resumed; provided, however, that this restriction does not apply to schools that are conducting only remote instruction. Further, Responsible Parties hosting competitive play must follow the Department’s guidance, including but not limited to reducing the capacity of indoor sports facilities to no more than 50% of the maximum occupancy, restricting spectators to no more than two spectators per player, and, where required, implementing and enforcing rules for appropriate social distancing, face coverings, and cleaning and disinfection.

These guidelines are minimum requirements only and each school is free to provide additional precautions or increased restrictions. These guidelines are based on the best-known public health practices at the time of publication, and the documentation upon which these guidelines are based can and does change frequently. The Responsible Parties – as defined above – are accountable for adhering to all local, state and federal requirements relative to schools and auxiliary activities. The Responsible Parties are also accountable for staying current with any updates to these requirements, and related guidance as stated above, as well as incorporating same into any school activities and/or school reopening plan(s).

Background

On March 7, 2020, Governor Andrew M. Cuomo issued [Executive Order 202](#), declaring a state of emergency in response to COVID-19. Community transmission of COVID-19 has occurred throughout New York. To minimize further spread, social distancing of at least six feet must be maintained between individuals, where possible.

On March 16, 2020, Governor Cuomo issued Executive Order [202.4](#), ordering all schools to close no later than March 18, 2020. Subsequent Executive Orders [202.11](#), [202.14](#), [202.18](#), and [202.28](#) extended such closure through the remainder of the 2019-2020 school year. On June 5, 2020, Governor Cuomo issued

Executive Order 202.37, allowing in-person special education services and instruction during the summer term, provided that any district offering such services follow state and federal guidance.

On March 20, 2020, Governor Cuomo issued Executive Order 202.6, directing all non-essential businesses to close in-office personnel functions. Essential businesses, as defined by Empire State Development Corporation (ESD) guidance, were not subject to the in-person restriction, but were, however, directed to comply with the guidance and directives for maintaining a clean and safe work environment issued by the New York State Department of Health (DOH), and were strongly urged to maintain social distancing measures to the extent possible.

On April 12, 2020, Governor Cuomo issued Executive Order 202.16, directing essential businesses to provide employees, who are present in the workplace, with a face covering, at no-cost, that must be used when in direct contact with customers or members of the public during the course of their work. On April 15, 2020, Governor Cuomo issued Executive Order 202.17, directing that any individual who is over age two and able to medically tolerate a face-covering must cover their nose and mouth with a mask or cloth face-covering when in a public place and unable to maintain, or when not maintaining, social distance. On April 16, 2020, Governor Cuomo issued Executive Order 202.18, directing that everyone using public or private transportation carriers or other for-hire vehicles, who is over age two and able to medically tolerate a face covering, must wear a mask or face covering over the nose and mouth during any such trip. It also directed any operators or drivers of public or private transport to wear a face covering or mask which covers the nose and mouth while there are any passengers in such a vehicle. On May 29, 2020, Governor Cuomo issued Executive Order 202.34, authorizing business operators/owners with the discretion to deny admittance to individuals who fail to comply with the face covering or mask requirements.

On April 26, 2020, Governor Cuomo announced a phased approach to reopen industries and businesses in New York in phases based upon a data-driven, regional analysis. On May 4, 2020, the Governor provided that the regional analysis would consider several public health factors, including new COVID-19 infections, as well as health care system, diagnostic testing, and contact tracing capacity. On May 11, 2020, Governor Cuomo announced that the first phase of reopening would begin on May 15, 2020 in several regions of New York, based upon available regional metrics and indicators. On May 29, 2020, Governor Cuomo announced that the second phase of reopening would begin in several regions of the state, and announced the use of a new early warning dashboard that aggregates the state's expansive data collection efforts for New Yorkers, government officials, and experts to monitor and review where and how the virus is being contained to ensure a safe reopening. On June 11, 2020, Governor Cuomo announced that the third phase of reopening would begin on June 12, 2020 in several regions of New York. On June 24, 2020, Governor Cuomo announced that several regions of the state were on track to enter the fourth phase of reopening, starting on June 26, 2020.

On May 8, 2020, Governor Cuomo launched New York's Reimagine Education Advisory Council – made up of educators, students, parents, and education leaders – to help school districts, colleges, and universities reimagine teaching and learning as they prepare to reopen while protecting the health and safety of students and educators. The collective expertise and experience of this advisory council helped address key questions about how to strengthen New York's entire education system and helped inform this guidance. Specifically, this distinguished Council recommended the following key principles, which are reflected throughout these guidelines:

- **Develop Flexible Plans:** Schools must allow students, faculty, and staff to return to an in-person classroom setting with safety rules in place, while creating plans that are flexible and adaptable to ever-changing circumstances, especially given the possibility of a resurgence of COVID-19.
- **Enact Safeguards to Protect the Health of Students and Employees:** Essential safeguards for in-person education must be embedded in schools' plans, including but not limited to developing procedures for hand hygiene, cleaning and disinfection; providing proper PPE; maintaining social distancing; developing screening procedures; considering implications of busing and transportation;

developing mitigation measures in cases of student and staff infections; considering needs of higher risk and vulnerable populations.

- Develop proper procedures for hand washing, cleaning and disinfection, ventilation, and appropriate use of PPE.
- Schools should provide proper PPE for those staff that must come into close contact with students, e.g. those who work with students that have certain disabilities.
- Schools should develop a plan for group purchasing of PPE.
- To maintain the safety of students and staff school districts plans must include physical/social distancing of six feet. In instances when six feet cannot be maintained proper face coverings must be worn in common areas such as hallways or on school buses. Provide exemptions or alternatives for those medically unable to wear masks.
- Place students in cohorts throughout the school day where feasible, and determine appropriate meal service options to ensure social distancing.
- Develop a plan for screening of students and staff.
- Consider the implications of busing (and limited busing) on students' ability to attend school in person.
- Work with state and local health departments to develop mitigation measures—such as additional disinfecting, postponing in-classroom instruction, or school closures—in cases of student and staff infections.
- Consider the needs of vulnerable populations and offer options for students and staff at higher risk of severe illness to limit their risk of exposure (e.g., virtual learning and teaching opportunities, respectively).
- Schools must work with state and local health departments as conditions may change. The flexible plan must adhere to federal and state guidelines for cleaning, sanitization and social distancing protocols.
- **Prioritize In-Classroom Instruction for Students that Need it the Most:** Schools should include steps to facilitate face-to-face instruction as much as possible, with a particular emphasis on in-person instruction for younger students, low-income students, special education students, English Language Learners, and those with limited access to technology.
- **Arts, CTE, Labs, and Other Areas Must be Prioritized:** Recognize the unique challenges and opportunities of remote instruction to the arts, career and technical education, physical education, laboratory coursework, and other activity-oriented subjects, understanding it is imperative that schools include in-person instruction in those areas to the extent possible.
- **Utilize Innovative Models Such as Community Schools:** Schools should be encouraged to expand community schools and wraparound services to support students and their families with essential needs like health and support services. Schools should create partnerships with arts, culture, athletic, and other community-based organizations. As part of this effort, schools should identify and ensure the availability of community resources to support the social, emotional, and health needs of students, families, and staff.
- **Establish Best Practices for Hybrid and Remote Learning:** Given the potential for intermittent school closures, or limited in-school activity, schools should establish effective hybrid and remote learning strategies in conjunction with stakeholders. In addition, schools should consider providing education/classroom activities in alternative non-traditional school spaces, such as community centers, simulcast lessons and professional development.
- **Share Best Practices throughout the Region/State:** Given the unprecedented challenges facing schools because of the ongoing public health emergency, schools should collaborate in developing reopening plans and districts should work with their communities and surrounding school districts to share knowledge and resources which promote efficiencies and increased opportunities for students, educators, and communities.

- Collaborate with Stakeholders: Schools should collaborate with stakeholders within districts and create specific processes to ensure that multiple perspectives are considered when developing plans.
- Communicate and Share Plans Widely: School plans should be readily available and accessible in all dominant languages spoken by students and their parents/legal guardians.

In addition to the following standards, schools must continue to comply with the guidance and directives for maintaining clean and safe work environments issued by DOH.

Please note that where guidance in this document differs from other guidance documents issued by New York State, or the respective regulatory or oversight body, such as NYSED or DOH, the more recent guidance shall apply.

Standards for Responsible School Activities in New York State

No school activities can operate without meeting the following minimum State guidance, as well as applicable federal requirements, including but not limited to such minimum standards of the Americans with Disabilities Act (ADA), Centers for Disease Control and Prevention (CDC), Environmental Protection Agency (EPA), and OSHA. The State standards apply to all school activities in operation during the COVID-19 public health emergency until rescinded or amended by the State.

The following guidance is provided to help schools develop their reopening plans and is organized around three distinct categories: people, places, and processes.

I. PEOPLE

A. Social Distancing and Face Covering

Social Distancing

- Responsible Parties must ensure that appropriate social distancing is maintained between individuals while in school facilities and on school grounds, inclusive of students, faculty, and staff, unless safety or the core activity (e.g., instruction, moving equipment, using an elevator, traveling in common areas) requires a shorter distance or individuals are of the same household.

Face Coverings

- Any time or place that individuals cannot maintain appropriate social distancing, individuals must wear acceptable face coverings.
- Face coverings are strongly recommended at all times, except for meals and instruction with appropriate social distancing. However, Responsible Parties can require face coverings at all times, even during instruction; and it is strongly recommended in areas with higher rates of COVID-19 community infection.
 - Responsible Parties requiring the wearing of face coverings by students at all times will need to consider and address developmental appropriateness, feasibility, and ability to implement such policy in a safe, consistent manner.
- Responsible Parties should develop plans for face covering breaks for students when they can maintain social distance.
- All individuals in school facilities and on school grounds must be prepared to put on a face covering if another person unexpectedly cannot socially distance; and for this reason, individuals – including

students – must wear face coverings in common areas, such as entrances/exits, lobbies, and when traveling around the school.

- Students who are unable to medically tolerate a face covering, including students where such covering would impair their physical health or mental health are not subject to the required use of a face covering.
- Responsible Parties should consider assistance to students who may have difficulty in adapting to wearing a face covering.
- Responsible Parties must train all students, faculty, and staff on how to adequately put on, take off, clean (as applicable), and discard PPE, including but not limited to, appropriate face coverings. This training should be extended to contractors and vendors, if the Responsible Parties will be supplying the contractors and vendors with PPE.

Social Distancing for Certain Activities

- Responsible Parties should ensure that a distance of twelve feet in all directions is maintained between individuals while participating in activities requires projecting the voice (e.g., singing), playing a wind instrument, or aerobic activity resulting in heavy breathing (e.g., participating in gym classes).

Space Configurations

- Responsible Parties are strongly encouraged to (1) modify or reconfigure spaces and areas, and/or (2) restrict the use of classrooms and other places where students, faculty, and staff gather (e.g., lockers, cubbies, entryways, hallways), so that individuals can be socially distanced (e.g., side-to-side and when facing one another), and are not sharing workstations, desks, tables, or other shared surfaces without cleaning and disinfection between use.
 - If Responsible Parties are using a cohort model, cleaning and disinfection may be performed in between each group's use instead of individual's use.
- Where feasible, Responsible Parties should put in place measures to reduce bi-directional foot traffic using tape or signs with arrows in hallways, or spaces throughout the school, and post signage and distance markers denoting spaces of six feet in all commonly used areas and any areas in which lines are commonly formed or people may congregate (e.g., outdoor spaces, libraries, classrooms, cafeterias, health screening stations).
- Responsible Parties should determine which facilities, grounds, or portions thereof (e.g., libraries, recreational facilities) will be closed to the public (i.e., not students, faculty, or staff) or offer limited, specific hours to members of the general public. Any use of a school facility or grounds by the general public must be subject to the same guidelines required during all other school operations.
- Responsible parties should work to find additional or alternate space with community-based organizations and other operators of alternative spaces (e.g., local governments) to maximize capacity for in-person learning.

Schedules

- Responsible Parties should consider staggered arrival and pick-up times to facilitate proper social distancing, and assign lockers or other student storage areas by cohort or eliminate their use. However, students should not carry an unreasonable number of books or materials throughout the day.

Signage

- Responsible Parties must post signs throughout the school and should regularly share similar messages with the school community, consistent with DOH COVID-19 signage regarding public health protections against COVID-19. Responsible Parties can develop their own customized and age-

appropriate signage specific to their school or educational setting, provided that such signage is consistent with the Department's signage. Signage should be used to remind individuals to:

- Stay home if they feel sick.
- Cover their nose and mouth with an acceptable face covering when unable to maintain social distance from others or in accordance with any stricter policy implemented by the school.
- Properly store and, when necessary, discard PPE.
- Adhere to social distancing instructions.
- Report symptoms of, or exposure to, COVID-19, and how they should do so.
- Follow hand hygiene, and cleaning and disinfection guidelines.
- Follow respiratory hygiene and cough etiquette.

B. Gatherings

Meals

- Responsible Parties must ensure social distancing between individuals while eating in school cafeteria. If not feasible, meals may be served in alternate areas (e.g., classrooms) or in staggered meal periods to ensure social distancing and proper cleaning and disinfection between students.
 - Responsible Parties must prohibit sharing of food and beverages (e.g., buffet style meals, snacks), unless individuals are members of the same household. Adequate space should be reserved for students, faculty, and staff to observe social distancing while eating meals.

Small Spaces

- Responsible Parties should limit gathering in small spaces (e.g., elevators, supply rooms, faculty offices) by more than one individual at a time, unless all individuals in such space at the same time are wearing acceptable face coverings or are members of the same household. However, even with face coverings in use, occupancy should not exceed 50% of the maximum capacity of the space, unless it is designed for use by a single occupant.

Faculty and Staff Meetings

- Pursuant to their school reopening plan, Responsible Parties may consider choosing to use video or teleconferencing for faculty and staff meetings and conferences to reduce the density of congregations, per CDC guidance "[Interim Guidance for Businesses and Employers to Plan and Respond to Coronavirus Disease 2019 \(COVID-19\)](#)". When videoconferencing or teleconferencing is not preferable or possible, Responsible Parties may choose to hold meetings in open, well-ventilated spaces and ensure that individuals maintain appropriate social distance (e.g., leave space between chairs, have individuals sit in alternating chairs).

Ventilation

- Responsible Parties should increase ventilation with outdoor air to the greatest extent possible (e.g., opening windows and doors) while maintaining health and safety protocols.

Common Areas

- Responsible Parties should take additional measures to prevent congregation in elevator waiting areas and limit density in elevators, by, for instance, enabling the use of stairs.
- Responsible Parties may choose to encourage social distancing by reducing access to, or closing, non-essential amenities and communal areas that do not allow for adequate social distancing

protocols to be followed. If open, Responsible Parties should make hand sanitizer or disinfecting wipes available near such amenities or areas (e.g., vending machines, communal coffee stations).

- However, Responsible Parties should not provide cleaning and disinfecting supplies to students, particularly younger students, nor should students be present when disinfectants are in use.
- Responsible Parties should put in place practices for adequate social distancing in small areas, such as restrooms and breakrooms, and should develop signage and systems (e.g., flagging when occupied) to restrict occupancy when social distancing cannot be maintained in such areas.
- To the extent practical, Responsible Parties may consider staggering schedules for faculty and staff to reduce density and promote social distancing in enclosed areas (e.g., coffee breaks, meals, and shift starts/stops).

C. Operational Activity

Cohorts

- Responsible Parties are recommended to cohort students to the extent practicable to limit potential exposure. "Cohorts," particularly for younger students, are self-contained, pre-assigned groups of students with reasonable group size limits set forth by the school in their plan. Responsible Parties should enact measures to prevent intermingling across cohorts, to the greatest extent possible (e.g., separation by appropriate social distancing, particular if there are multiple cohorts in one area). Responsible Parties should make reasonable efforts to ensure that cohorts are fixed – meaning contain the same students – for the duration of the COVID-19 public health emergency. Faculty may instruct more than one cohort so long as appropriate social distancing is maintained.

In-Person Instruction

- While the goal is to return all students to in-person instruction, due to the dynamic nature and risk of community transmission of COVID-19, Responsible Parties should prepare for a combination of in-person instruction and remote learning to facilitate a phased-in approach or hybrid model, which may be necessary at various times throughout the 2020-2021 school year. In such approaches and models, Responsible Parties may use video or conferencing in lieu of in-person gatherings (e.g., classes, office hours), per CDC guidance "[Interim Guidance for Businesses and Employers to Plan and Respond to Coronavirus Disease 2019 \(COVID-19\)](#)".
 - In cases where in-person instruction is not feasible, phased-in and hybrid models of education will need to consider if certain students will be prioritized for in-person instruction first or more frequently based on educational or other needs (e.g., early grades, students with disabilities, English language learners), and must balance this with equity, capacity, social distancing, PPE, feasibility, and learning considerations.
 - If COVID-19 cases develop, Responsible Parties may consider restricting access within school facilities and across school grounds, particularly in affected areas to avoid full school closures. In such instances, Responsible Parties may choose to temporarily move classes where an individual has tested positive for COVID-19 to remote/virtual format until all contacts can be identified, notified, tested, and cleared.
- To maximize in-person instruction, Responsible Parties should consider measures that can be implemented to decrease density and congregation in school facilities and on school grounds, when possible, such as:
 - Finding alternative spaces in the community to allow for more in-person instruction;
 - adjusting class or work hours, where appropriate and possible;

- limiting in-person presence to only those staff who are necessary to be at the school during normal school hours;
- maintaining or increasing remote workforce (e.g., administrative staff) to accommodate social distancing guidelines;
- staggering schedules and allowing more time between classes to reduce congestion in hallways, walkways, and buildings; and/or
- shifting design of class schedules to accommodate social distancing guidelines, including cohorts (e.g., alternative classroom schedules, full-time in-person learning for younger students, and part-time distance learning for older students).

D. Movement and Commerce

Student Drop-Off and Pick-Up

- Responsible Parties should establish designated areas for student drop-off and pick-up, limiting contact and entry of parents/legal guardians into the building, to the greatest extent possible.

Deliveries

- Responsible Parties should establish designated areas for pickups and deliveries, limiting contact to the extent possible.

Faculty/Staff Entrances and Exits

- To the extent feasible, Responsible Parties should limit on-site interactions (e.g., designating separate ingress or egress for faculty and staff, eliminating bidirectional flow of individuals to the extent practicable).

Shared Objects

- Responsible Parties should put in place plans or measures to limit the sharing of objects, such as lockers, cubbies, laptops, notebooks, touchscreens, writing utensils, chalk and dry erase boards, musical instruments, tools, and toys, as well as the touching of shared surfaces, such as conference tables and desks; or require students, faculty, and staff to perform hand hygiene before and after contact.

II. PLACES

A. Personal Protective Equipment

- Acceptable face coverings for COVID-19 include but are not limited to cloth-based face coverings (e.g., homemade sewn, quick cut, bandana), and surgical masks that cover both the mouth and nose. Face shields worn without other face coverings are not considered adequate protection or source control against COVID-19 and should not be used.
 - Responsible Parties and faculty may use alternate PPE (i.e., face coverings that are transparent at or around the mouth) for instruction or interventions that require visualization of the movement of the lips and/or mouths (e.g., speech therapy). These alternate coverings may also be used for certain students (e.g., hearing impaired) who benefit from being able to see more of the face of the faculty or staff member.
- However, cloth-based face coverings or disposable masks shall not be considered acceptable face coverings for workplace activities that require a higher degree of protection for PPE due to the nature of the work. For those types of activities, N-95 respirators or other PPE used under existing industry standards should continue to be used, in accordance with OSHA guidelines.

- In addition to the necessary PPE as required for certain workplace activities, Responsible Parties must procure, fashion, or otherwise obtain acceptable face coverings and provide such coverings to their faculty and staff who directly interact with students or members of the public while at work at no cost to the faculty or staff member, pursuant to Executive Order 202.16, as amended and extended.
- Responsible Parties should have an adequate supply of face coverings, masks, and other required PPE on hand should faculty or staff need a replacement, or a student be in need.
- Responsible Parties must advise students, faculty, staff, and visitors that they are required to wear face coverings in common areas or situations where social distancing may be difficult to maintain, such as riding in elevators, entering/exiting classrooms or student centers, walking in hallways, and traveling around school buildings.
- Responsible Parties must allow students, faculty, and staff to use their own acceptable face coverings, but cannot require faculty and staff to supply their own face coverings. Further, this guidance shall not prevent employees from wearing their personally owned protective coverings (e.g., surgical masks, N-95 respirators, face shields), as long as they adhere to the minimum standards of protection for the specific activity. Responsible Parties may otherwise require employees to wear more protective PPE due to the nature of their work. If applicable, employers should comply with all applicable OSHA standards.
- Responsible Parties may request that students bring their own face covering, but may not require it and must procure, fashion, or otherwise obtain acceptable face coverings and provide such coverings to any student who does not have their own, at no cost to the student.
- Face coverings should be cleaned or replaced after use and must not be shared. Students and parents/legal guardians should take responsibility for maintaining their face coverings. Please consult CDC [guidance](#) for additional information on cloth face coverings and other types of PPE, as well as instructions on use and cleaning.

B. Hygiene, Cleaning and Disinfection

Hygiene

- Responsible Parties must ensure adherence to hygiene and cleaning and disinfection requirements as advised by the CDC and DOH, including "[Guidance for Cleaning and Disinfection of Public and Private Facilities for COVID-19](#)," and the "[STOP THE SPREAD](#)" poster, as applicable. Responsible Parties must maintain logs that include the date, time, and scope of cleaning and disinfection. Responsible Parties must identify cleaning and disinfection frequency for each facility type and assign responsibility.
- Responsible Parties must train all students, faculty, and staff on proper hand and respiratory hygiene, and should provide information to parents and/or legal guardians on ways to reinforce this at home.
- Responsible Parties must provide and maintain hand hygiene stations around the school, as follows:
 - For handwashing: soap, running warm water, and disposable paper towels.
 - For hand sanitizing: an alcohol-based hand sanitizer containing at least 60% alcohol for areas where handwashing facilities may not be available or practical.
 - School medical or health directors should approve and permit the use of alcohol-based hand sanitizers in school facilities without individual's physician orders as alcohol-based hand sanitizers are considered over-the-counter drugs. Student use of alcohol-based hand sanitizers should always be supervised by adults to minimize accidental ingestion and promote safe usage; supervision is required for elementary school students. Parents/guardians can inform the school that they do not want their child to use alcohol-based hand sanitizers by sending a written notice to the school. Schools must provide

accommodations for students who cannot use hand sanitizer, to allow for their use of handwashing stations.

- Make hand sanitizer available throughout common areas. It should be placed in convenient locations, such as at building, classroom, and cafeteria entrances and exits. Touch-free hand sanitizer dispensers should be installed where possible.
 - Responsible Parties should place signage near hand sanitizer stations indicating that visibly soiled hands should be washed with soap and water; hand sanitizer is not effective on visibly soiled hands.
 - Responsible Parties should remind individuals that alcohol-based hand sanitizers can be flammable and may not be suitable for certain areas in school facilities and on school grounds.
- Responsible Parties should place receptacles around the school for disposal of soiled items, including paper towels and PPE.

Cleaning and Disinfection

- Responsible Parties should ensure that cleaning and disinfection are the primary responsibility of the school's custodial staff. However, Responsible Parties may also choose to provide appropriate cleaning and disinfection supplies to faculty and staff for shared and frequently touched surfaces:
 - Consider providing disposable wipes to faculty and staff so that commonly used surfaces (e.g., keyboards, desks, remote controls) can be wiped down before and/or after use, followed by hand hygiene.
 - To reduce high-touch surfaces, Responsible Parties should install touch-free amenities, such as water-bottle refilling stations, trash receptacles and paper towel dispensers, where feasible.
 - If installing touch-free amenities is not feasible, Responsible Parties should, at a minimum, make hand sanitizer available near high-touch surfaces (e.g., trash receptacles, paper towel dispensers).
 - Responsible Parties should consider closing water drinking fountains (unless they are configured as a bottle refilling station) and encourage students, faculty, and staff to bring their own water bottles or use disposable cups.
- Responsible Parties must conduct regular cleaning and disinfection of the facilities and more frequent cleaning and disinfection for high-risk areas used by many individuals and for frequently touched surfaces, including desks and cafeteria tables which should be cleaned and disinfected between each individual's use, if shared. If cohorts are used, cleaning and disinfection may take place between each cohort's use rather than each individual. Cleaning and disinfection must be rigorous and ongoing and should occur at least daily, or more frequently as needed. Please refer to DOH's "[Interim Guidance for Cleaning and Disinfection of Public and Private Facilities for COVID-19](#)" and "[Interim Guidance for Cleaning and Disinfection of Primary and Secondary Schools for COVID-19](#)" for detailed instructions on how to clean and disinfect facilities.
 - Responsible Parties must ensure regular cleaning and disinfection of restrooms. Restrooms should be cleaned and disinfected more often depending on frequency of use.
 - Responsible Parties should ensure that materials and tools used by employees are regularly cleaned and disinfected using registered disinfectants. Refer to the Department of Environmental Conservation (DEC) [list of products](#) registered in New York State and identified by the EPA as effective against COVID-19.
 - If cleaning or disinfection products or the act of cleaning and disinfection causes safety hazards or degrades the material or machinery, Responsible Parties must put in place hand

hygiene stations between use and/or supply disposable gloves and/or limitations on the number of employees using such machinery.

- Best practices to implement in residential, shared (i.e., communal) bathrooms include, but are not limited to:
 - Installation of physical barriers between toilets and sinks if six feet of separation is not feasible; and
 - Use of touch-free paper towel dispensers in lieu of air dryers.
- Responsible Parties must ensure distancing rules are adhered to by using signage, occupied markers, or other methods to reduce restroom occupancy at any given time, where feasible.

Cleaning and Disinfection Following Suspected or Confirmed COVID-19 Case

- Responsible Parties must provide for the cleaning and disinfection of exposed areas in the event an individual is confirmed to have COVID-19, with such cleaning and disinfection to include, at a minimum, all heavy transit areas and high-touch surfaces.
- Responsible Parties are expected to follow CDC guidelines on "Cleaning and Disinfecting Your Facility," if someone is suspected or confirmed to have COVID-19:
 - Close off areas used by the person who is suspected or confirmed to have COVID-19.
 - Responsible Parties do not necessarily need to close operations, if they can close off the affected areas (e.g., classroom, restroom, hallway), but they should consult with local health departments in development of their protocols.
 - Open outside doors and windows to increase air circulation in the area.
 - Wait 24 hours before you clean and disinfect, unless waiting 24 hours is not feasible, in which case, wait as long as possible.
 - Clean and disinfect all areas used by the person suspected or confirmed to have COVID-19, such as offices, classrooms, bathrooms, lockers, and common areas.
 - Once the area has been appropriately cleaned and disinfected, it can be reopened for use.
 - Individuals without close or proximate contact with the person suspected or confirmed to have COVID-19 can return to the area and resume school activities immediately after cleaning and disinfection.
 - Refer to DOH's "Interim Guidance for Public and Private Employees Returning to Work Following COVID-19 Infection or Exposure" for information on "close and proximate" contacts.
 - If more than seven days have passed since the person who is suspected or confirmed to have COVID-19 visited or used the facility, additional cleaning and disinfection is not necessary, but routine cleaning and disinfection should continue.

C. Coordination and Phased Reopening

- Responsible Parties must designate a COVID-19 safety coordinator whose responsibilities include continuous compliance with all aspects of the school's reopening plan, as well as any phased-in reopening activities necessary to allow for operational issues to be resolved before activities return to normal or "new normal" levels.

D. Communications Plan

- Responsible Parties must affirm that they have reviewed and understand the State-issued industry guidelines and must submit reopening plans, as outlined above and instructed below, prior to reopening.
 - Please note that the State will decide on reopening dates for Pre-K through Grade 12 schools in early August 2020.
- Responsible Parties must engage with school stakeholders and community members (e.g., administrators, faculty, staff, students, parents/legal guardians of students, local health departments, local health care providers, and affiliated organizations, such as unions, alumni, and/or community-based groups) when developing reopening plans. Plans for reopening should identify the groups of people involved and engaged throughout the planning process.
- Responsible Parties must develop a communications plan for students, parents or legal guardians of students, staff, and visitors that includes applicable instructions, training, signage, and a consistent means to provide individuals with information. Responsible Parties may consider developing webpages, text and email groups, and/or social media groups or posts.
- Responsible Parties must ensure all students are taught or trained how to follow new COVID-19 protocols safely and correctly, including but not limited to hand hygiene, proper face covering wearing, social distancing, and respiratory hygiene.
- Responsible Parties must encourage all students, faculty, staff, and visitors through verbal and written communication (e.g., signage) to adhere to CDC and DOH guidance regarding the use of PPE, specifically acceptable face coverings, when a social distance cannot be maintained.
- Responsible Parties should designate a coordinator or other point(s)-of-contact to be the main contact upon the identification of positive COVID-19 cases and to be responsible for subsequent communication. Coordinators should be responsible for answering questions from students, faculty, staff, and parents or legal guardians of students regarding the COVID-19 public health emergency and plans implemented by the school.
 - Coordinators should also work closely with local health departments and other schools to monitor public health conditions and jointly develop monitoring strategies.

E. Residential Living Considerations

- For schools with students who reside on campus, Responsible Parties must consider the following as they develop their plans:
 - Residence halls: Plans should include protocols for capacity limits, enhanced cleaning and disinfection, appropriate social distancing, use of acceptable face coverings in common areas, restrictions on non-essential gatherings and activities, limited access by students to other residential facilities (e.g., dormitories), restrictions of visitors, special housing considerations for students who are immunocompromised or who have an underlying health condition, separate living spaces for persons undergoing isolation or quarantine, and a modified set of rules for students to follow;
 - Residential testing: Plan for screening all students and faculty upon return, and to ensure diagnostic testing for any students or faculty members who screen positive for potential COVID-19 infection upon return, especially including any individuals with recent international or long-distance travel, or travel from designated states with widespread community transmission of COVID-19, as identified through the [New York State Travel Advisory](#);
 - Residential isolation and quarantine: Isolation (for individuals with suspected or confirmed case of COVID-19) or quarantine (for individuals exposed to a suspected or confirmed case of COVID-19, or who have recently traveled internationally or in states with widespread COVID-19

transmission) of individuals residing on school grounds may become necessary and schools should develop plans, in consultation with the local health department, that specify where individuals will be residing (e.g., dedicated residence hall, hotel, home) and the support system that will be implemented to meet daily needs (e.g., food, medication, psychosocial, academic and/or other support) throughout the duration of their isolation or quarantine. Plans should include measures to monitor and provide medical care and other health services to students who test positive and are in isolation, need more advanced medical care, or who are awaiting test results; and

- Residence move-out: Plans need to be put in place for how students should safely depart residence halls in the event of a closure. Schools should consider policies for students who may not be able to depart campus quickly (e.g. international students).

III. PROCESSES

A. Screening and Testing

Health Screening and Temperature Checks

- Responsible Parties must implement mandatory health screenings, including temperature checks, of students, faculty, staff, and, where applicable, contractors, vendors, and visitors to identify any individuals who may have COVID-19 or who may have been exposed to the COVID-19 virus.
 - Temperature checks should be conducted per U.S. Equal Employment Opportunity Commission or DOH guidelines. Specifically, all individuals must have their temperature checked each day – ideally, at home, prior to departing to school – before entering any school facility. If an individual presents a temperature of greater than 100.0°F, the individual must be denied entry into the facility, or sent directly to a dedicated area prior to being picked up or otherwise sent home.
 - Responsible Parties must also use a daily screening questionnaire for faculty and staff reporting to school; and periodically use a questionnaire for students, particularly younger students, who may require the assistance of their parent/legal guardian to answer.
 - Responsible Parties are prohibited from keeping records of student, faculty, staff, and visitor health data (e.g., the specific temperature data of an individual), but are permitted to maintain records that confirm individuals were screened and the result of such screening (e.g., pass/fail, cleared/not cleared).
 - Screening is strongly recommended to be conducted remotely (e.g. by electronic survey, digital application, or telephone, which may involve the parent/legal guardian), before the individual reports to school, to the extent possible; or may be performed on site at the school.
 - Remote screening should be coordinated to identify individuals who should not go to school and should be referred to their health care provider for further evaluation and COVID-19 testing.
 - On-site screening should be coordinated in a manner that prevents individuals from intermingling in close or proximate contact with each other prior to completion of the screening.
 - Screening for all students, faculty, staff, and, where practicable, visitors, contractors, and vendors, must be completed using a questionnaire that determines whether the individual has:
 - (a) knowingly been in close or proximate contact in the past 14 days with anyone who has tested positive through a diagnostic test for COVID-19 or who has or had symptoms of COVID-19;
 - (b) tested positive through a diagnostic test for COVID-19 in the past 14 days;

- (c) has experienced any symptoms of COVID-19, including a temperature of greater than 100.0°F, in the past 14 days; and/or
- (d) has traveled internationally or from a state with widespread community transmission of COVID-19 per the New York State Travel Advisory in the past 14 days.
- As able, Responsible Parties should consider implementing health screening practices for unscheduled visitors (e.g., members of the public allowed to use school grounds).
- Refer to CDC guidance on "Symptoms of Coronavirus" for the most up to date information on symptoms associated with COVID-19.
 - Please note that the manifestation of COVID-19 in children, although similar, is not always the same as that for adults. Children may be less likely to present with fever as an initial symptom, and may only have gastrointestinal tract symptoms, which should be taken into consideration during the screening process. Schools should also consider reminding parents/guardians that students may not attend school if they have had a temperature of greater than 100.0°F at any time in the past 14 days, even if a fever-reducing medication was administered and the student no longer has a fever.
- Responsible Parties should remain aware that quarantine of students, faculty, or staff may be required after international travel or travel within certain states with widespread community transmission of COVID-19, pursuant to current CDC and DOH guidance, as well as Executive Order 205.

Positive Screen Protocols

- Any individual who screens positive for COVID-19 exposure or symptoms, if screened at the school, must be immediately sent home with instructions to contact their health care provider for assessment and testing.
 - Students who are being sent home because of a positive screen (e.g., onset of COVID-19 symptoms) must be immediately separated from other students and supervised until their parent/legal guardian or emergency contact can retrieve them from school.
 - Responsible Parties should provide such individuals with information on health care and testing resources, if applicable.
 - Responsible Parties must immediately notify the state and local health department about the case if diagnostic test results are positive for COVID-19.
- Responsible Parties must require individuals to immediately disclose if and when their responses to any of the aforementioned questions changes, such as if they begin to experience symptoms, including during or outside of school hours.
- Responsible Parties must establish policies, in consultation with the local health department(s), about the requirements for determining when individuals, particularly students, who screened positive for COVID-19 symptoms can return to the in-person learning environment. This returning to learning protocol must include at minimum documentation from a health care provider evaluation, negative COVID-19 testing, and symptom resolution, or if COVID-19 positive, release from isolation.
- Responsible Parties must designate a central point of contact(s), which may vary by activity, location, shift or day, responsible for receiving and attesting to having reviewed all screening activities, with such contact(s) also identified as the party for individuals to inform if they later experience COVID-19-related symptoms or COVID-19 exposure, as noted on the questionnaire.

In-Person Screening

- Responsible Parties must ensure that any personnel performing in-person screening activities, including temperature checks, are appropriately protected from exposure to potentially infectious

individuals entering the facilities. Personnel performing screening activities should be trained by employer-identified individuals who are familiar with CDC, DOH, and OSHA protocols.

- Screeners should be provided and use PPE, which includes at a minimum, an acceptable face covering or mask, and may also include gloves, a gown, and/or a face shield.

B. School Health Offices

- Responsible Parties may consider developing testing systems in school facilities or self-testing systems in collaboration with local health departments or local health care providers, as able.
- Responsible Parties must develop protocols for caring for a student, faculty, or staff member who develops COVID-19 symptoms during the school day. These protocols must include:
 - Identification of a dedicated area to separate students, faculty, or staff with symptoms of COVID-19 from others until they can go home or to a health care facility, depending on severity of illness;
 - Plans to ensure that symptomatic students who are waiting to be picked up remain under the visual supervision of a staff member who is socially distanced;
 - PPE requirements for school health office staff caring for sick individuals, which must include both standard and transmission-based precautions. In areas with moderate to substantial community transmission, eye protection (i.e., goggles or face shield) should be added. When caring for a suspect or confirmed individual with COVID-19, gloves, a gown, and a fit-tested N-95 respirator should be used, if available (or surgical face mask and face shield, if not available), as well as eye protection. Please consult CDC guidance for additional information; and
 - Required guidelines for cleaning and disinfection.
- Responsible Parties must develop protocols for asthma-related acute respiratory treatment care using up to date standard of care:
 - Nebulizer treatments and suctioning are identified by the CDC as aerosol-generating procedures requiring a N-95 mask fitted to the healthcare worker;
 - Consult with students' healthcare providers for alternate asthma medication delivery systems; and
 - Consult with school maintenance and facilities department for environmental controls.

C. Tracing and Tracking

Metrics

- Responsible Parties should identify clearly defined measures that will serve as warning signs that the level of COVID-19 transmission may be increasing in the school setting beyond an acceptable level, as defined by state and local health departments.
 - Responsible Parties must include a process in their plan if/when COVID-19 cases are discovered at school, including closing areas or classes where individuals were infected or more broadly the entire school in consultation with the local health department.
 - Responsible Parties may choose to modify operations prior to instituting school-wide closures to help mitigate a rise in cases.

Notification

- Responsible Parties must notify the state and local health department immediately upon being informed of any positive COVID-19 diagnostic test result by an individual in school facilities or on school grounds, including students, faculty, staff, and visitors.

Tracing Support

- In the case of an individual testing positive, Responsible Parties must develop plans to support local health departments in tracing all contacts of the individual, in accordance with the protocols, training, and tools provided through the New York State Contact Tracing Program. Confidentiality must be maintained as required by federal and state law and regulations. Responsible Parties must cooperate with state and local health department contact tracing, isolation, and quarantine efforts.
 - If feasible, Responsible Parties may offer optional tracing and tracking technology (e.g., mobile applications) to streamline contact tracing and communication process among their students, faculty, staff, parents/legal guardians of students, and community.
 - Responsible Parties should partner with local health departments to train faculty and staff to undertake contact tracing efforts for populations in school facilities and on school grounds, where feasible.

Quarantine, Isolation, and Return to School

- State and local health departments will implement monitoring and movement restrictions of COVID-19 infected or exposed persons, including isolation or quarantine.
- Responsible Parties must ensure that reporting plans are in place for individuals who are alerted that they have come into close or proximate contact with a person with COVID-19, and have been alerted to such exposure via tracing, tracking or other mechanism.
- Responsible Parties should refer to DOH's "Interim Guidance for Public and Private Employees Returning to Work Following COVID-19 Infection or Exposure" regarding protocols and policies for faculty and staff seeking to return to work after a suspected or confirmed case of COVID-19 or after the faculty or staff member had close or proximate contact with a person with COVID-19.

IV. SUBMISSION OF SCHOOL PLANS

Responsible Parties must submit an affirmation at the below link that they have read and understand this guidance. Further, pursuant to this guidance, Responsible Parties must prepare and submit plan(s) for reopening and operating during the ongoing emergency by July 31, 2020. If an extension is required, Responsible Parties should contact DOH and either NYSED if they are a school district, BOCES, private school, or NYSED-authorized charter school, or SUNY if they are a SUNY-authorized charter school, for an extension. Plans should be presumed to be approved upon submission, unless otherwise notified by the State that modifications are necessary to ensure compliance with this guidance.

Plans should reflect engagement with school stakeholders and community members (e.g., administrators, faculty, staff, students, parents/legal guardians of students, local health care providers, and affiliated organizations, such as unions, alumni, and/or community-based groups), particularly local health department(s), and, in accordance with the minimum requirements referenced herein, cover: (1) reopening of school facilities for in-person instruction, (2) monitoring of health conditions, (3) containment of potential transmission of the 2019 novel coronavirus, and (4) closure of school facilities and in-person instruction, if necessitated by widespread virus transmission.

Responsible Parties must conspicuously post completed reopening plans at the school and on their website for faculty, staff, students, and parents and legal guardians of students to access.

School districts and BOCES should use the following submission form link to file their plans with NYSED and DOH. DOH and/or NYSED may require such school districts and BOCES to modify their plans, to the extent necessary to ensure compliance with this guidance. Plans will be made publicly available.

<https://forms.ny.gov/s3/PK-12-Education-Reopening-Plan>, then select "School Districts and BOCES"

Charter schools should use the following submission form link to file their plans with DOH and their authorizer (i.e., NYSED or SUNY). DOH and/or NYSED/SUNY may require charter schools to modify their plans to the extent necessary to ensure compliance with this guidance. Plans will be made publicly available.

<https://forms.ny.gov/s3/PK-12-Education-Reopening-Plan>, then select "Charter Schools"

Private schools should use the following submission form link to file their plans with NYSED and DOH. DOH and/or NYSED may require private schools to modify their plans to the extent necessary to ensure compliance with this guidance. Plans will be made publicly available.

<https://forms.ny.gov/s3/PK-12-Education-Reopening-Plan>, then select "Private Schools"

Additional safety information, guidelines, and resources are available at:

New York State Department of Health Novel Coronavirus (COVID-19) Website
<https://coronavirus.health.ny.gov/>

New York State Education Department Coronavirus (COVID-19) Website
<http://www.nysed.gov/coronavirus>

Centers for Disease Control and Prevention Coronavirus (COVID-19) Website
<https://www.cdc.gov/coronavirus/2019-ncov/index.html>

Occupational Safety and Health Administration COVID-19 Website
<https://www.osha.gov/SLTC/covid-19/>

At the link below, affirm that you have read and understand your obligation to operate in accordance with this guidance:

<https://forms.ny.gov/s3/ny-forward-affirmation>

EXHIBIT G
TO DECLARATION OF
TIMOTHY P. FLANIGAN, MD
(EXHIBIT 4)

GUIDANCE FOR DETERMINING WHETHER A BUSINESS ENTERPRISE IS SUBJECT TO A WORKFORCE REDUCTION UNDER EXECUTIVE ORDER 202.68, RELATED TO NEW YORK'S CLUSTER ACTION INITIATIVE TO ADDRESS COVID-19 HOTSPOTS.

 esd.ny.gov/ny-cluster-action-initiative-guidance

October 7, 2020

- [Home](#) /
- New York's Cluster Action Initiative Guidance

FOR GUIDANCE RELATED TO DETERMINING WHETHER A BUSINESS ENTERPRISE IS SUBJECT TO A WORKFORCE REDUCTION UNDER EXECUTIVE ORDER 202.6, RELATED TO NEW YORK'S PAUSE, PLEASE CLICK [HERE](#).

Please review Frequently Asked Questions [here](#).

UPDATED: OCTOBER 7, 2020 AT 4:10 PM

This guidance is issued in accordance with New York Governor Andrew M. Cuomo's [Executive Order 202.68](#), which directs the Department of Health to determine areas in the State that require enhanced public health restrictions based upon cluster-based cases of COVID-19 at a level that compromises the State's containment of the virus. **Certain activities shall be restricted and any permitted activities, in the three zones (Red, Orange, Yellow) described below, shall be conducted in strict adherence to Department of Health guidance.**

This guidance is issued by the New York State Department of Economic Development d/b/a Empire State Development (ESD), in consultation with the Department of Health, and applies to each business or entity location individually and is intended to assist businesses in determining whether they are an essential business, if they are located in areas with designated cluster activity (*see below for details*). With respect to business or entities that operate or provide both essential and non-essential services, supplies or support, only those lines and/or business operations that are necessary to support the essential services, supplies, or support are exempt from the workforce reduction restrictions.

Where permitted to operate within the cluster action initiative, businesses and other entities must continue to follow the relevant industry-specific guidelines provided by Department of Health as available on the *New York Forward* [website](#) for their applicable operations and activities. Further, State and local governments, including municipalities

and authorities, are exempt from these essential business reductions, but may be subject to other provisions that restrict non-essential, in-person workforce and other operations under Executive Order 202.

On October 6, 2020, Governor Cuomo announced a new cluster action initiative to address COVID-19 hotspots that cropped up in various areas of New York. Working with the top public health experts, the State developed a science-based approach to contain these clusters and stop any further spread of the virus, including new rules and restrictions directly targeted to areas with the highest concentration of COVID cases and the surrounding communities. The new rules are in effect for a minimum of 14 days.

The initiative is composed of three steps:

- (1) Reduce in-person activities and interactions within the cluster, similar to *New York on PAUSE*;
- (2) Take action in the area surrounding the cluster to stop the spread; and
- (3) Take precautionary action in the outlying communities.

The initiative currently applies to clusters in the following areas:

- **Broome County (One Area, Yellow) - Click Here for Map**
- **Brooklyn (One Area, Red, Orange and Yellow) - Click Here for Map**
- **Orange County (One Area, Red and Yellow) - Click Here for Map**
- **Queens (Two Areas, Red, Orange and Yellow) - Click Here and Here for Maps**
- **Rockland County (One Area, Red and Yellow) - Click Here for Map**

Find COVID-19 Hot Spot Zones by Address

Red Zone – Cluster Itself

Activity restrictions include:

- No non-essential gatherings of any size
- Houses of worship are subject to a capacity limit of 25% of maximum occupancy or 10 people, whichever is fewer
- Restaurants and taverns must cease serving patrons food or beverage on-premises and may be open for takeout or delivery only
- Schools must close for in-person instruction, except as otherwise provided in Executive Order.

All non-essential businesses in the red zone, which do not meet the criteria below, shall reduce in-person workforce by 100%.

Orange Zone – Warning Zone

Activity restrictions include:

- Non-essential gatherings shall be limited to 10 people
- Houses of worship are subject to a capacity limit of the lesser of 33% of maximum occupancy or 25 people, whichever is fewer
- Restaurants and taverns must cease serving patrons food or beverage inside on-premises but may provide outdoor service, and may be open for takeout or delivery, provided that any one seated group or party must not exceed 4 people
- Schools must close for in-person instruction, except as otherwise provided in Executive Order.
- Certain non-essential businesses, for which there is a higher risk of transmission of the COVID-19 virus, shall reduce in-person workforce by 100%; such businesses include:
 - Gyms, fitness centers or classes
 - Hair salons and barbershops
 - All other personal care services including but not limited to spas, tattoo or piercing parlors, nail technicians and nail salons, cosmetologists, estheticians, the provision of laser hair removal and electrolysis

Yellow Zone – Precautionary Zone

Activity restrictions include:

- Non-essential gathers are limited to no more than 25 people
- Houses of worship are subject to a capacity limit of 50% of its maximum occupancy and shall adhere to Department of Health guidance
- Restaurants and taverns must limit any one seated group or party size to 4 people
- Schools shall adhere to applicable guidance issued by the Department of Health regarding mandatory testing of students and school personnel

For purposes of Executive Order 202.68, essential businesses allowed to remain open in any red zone(s) include:

1. Essential health care operations including

- research and laboratory services
- hospitals
- walk-in-care health clinics and facilities
- veterinary and livestock medical services

- senior/elder care
- medical wholesale and distribution
- home health care workers or aides for the elderly
- doctors and doctors' offices for both emergency and non-emergency appointments
- dentists and dental practices for both emergency and non-emergency appointments
- nursing homes, residential health care facilities, or congregate care facilities
- medical supplies and equipment manufacturers and providers
- licensed mental health providers
- licensed substance abuse treatment providers
- medical billing support personnel
- speech pathologists and speech therapy
- chiropractic services
- acupuncture
- physical therapy
- occupational therapy
- medically necessary massage therapy

2. Essential infrastructure including

- public and private utilities including but not limited to power generation, fuel supply, and transmission
- public water and wastewater
- telecommunications and data centers
- airlines/airports
- commercial shipping vessels/ports and seaports
- public and private transportation infrastructure such as bus, rail, for-hire vehicles, garages
- hotels, and other places of accommodation, including campgrounds.

Campgrounds must take precautions to ensure campers maintain appropriate social distancing and adhere to proper cleaning and disinfecting protocols, including but not limited to maintaining six feet of distance between campers, unless wearing an acceptable face covering, excluding persons from the same household who are camping together.

3. Essential manufacturing including

- food processing, manufacturing agents including all foods and beverages
- chemicals
- medical equipment/instruments
- pharmaceuticals
- sanitary products including personal care products regulated by the Food and Drug Administration (FDA)

- telecommunications
- microelectronics/semi-conductor
- food-producing agriculture/farms
- household paper products
- defense industry and the transportation infrastructure
- automobiles
- any parts or components necessary for essential products that are referenced within this guidance

4. Essential retail including

- grocery stores including all food and beverage stores
- pharmacies
- convenience stores
- farmer's markets
- gas stations
- restaurants/bars (but only for take-out/delivery)
- hardware, appliance, and building material stores
- pet food
- telecommunications to service existing customers and accounts
- all other retail may operate for curbside pick-up or delivery only with no customers allowed within the establishment and only one employee physically present to fulfill orders.

5. Essential services including

- 2020 Census operations and activities
- trash and recycling collection, processing, and disposal
- mail and shipping services
- laundromats and other clothing/fabric cleaning services
- building cleaning and maintenance
- child care services
- bicycle repair
- auto repair and maintenance
- automotive sales conducted remotely or electronically, with in-person vehicle showing, return, and delivery by appointment only
- warehouse/distribution and fulfillment
- funeral homes, crematoriums and cemeteries
- storage for essential businesses
- maintenance for the infrastructure of the facility or to maintain or safeguard materials or products therein

- animal shelters and animal care including dog walking, animal boarding and pet grooming but only to the extent necessary to ensure animal health
- food and non-food agriculture
- landscaping, gardening and horticulture
- designing, printing, publishing and signage companies to the extent that they support essential businesses or services
- remote instruction or streaming of classes from public or private schools or health/fitness centers; provided, however, that no in-person congregate classes are permitted

6. News media

7. Certain office-based work, including financial services and research

- banks or lending institution
- insurance
- payroll
- accounting
- services related to financial markets, except debt collection
- higher education research
- other office-based work not specified here may operate remotely

8. Providers of basic necessities to economically disadvantaged populations including

- homeless shelters and congregate care facilities
- food banks
- human services providers whose function includes the direct care of patients in state-licensed or funded voluntary programs; the care, protection, custody and oversight of individuals both in the community and in state-licensed residential facilities; those operating community shelters and other critical human services agencies providing direct care or support

9. Construction

Construction projects may continue, but any work that can be done remotely such as office-based work must proceed remotely, to the extent practicable.
Employees/personnel who are not directly involved in in-person work at the business location/construction site are prohibited.

10. Defense

defense and national security-related operations supporting the U.S. Government or a contractor to the US government

11. Essential services necessary to maintain the safety, sanitation and essential operations of residences or other businesses including

- law enforcement, including corrections and community supervision
- fire prevention and response
- building code enforcement
- security, including security personnel for residential and commercial buildings
- emergency management and response, EMS and 911 dispatch
- building cleaners or janitors
- general and specialized maintenance whether employed by the entity directly or a vendor, including but not limited to heating, ventilation, and air conditioning (HVAC) and pool maintenance
- automotive repair
- cleaning, disinfection, and sanitation services
- occupational safety and health professionals
- residential and commercial moving services

12. Vendors that provide essential services or products, including logistics and technology support, child care and services including but not limited to:

- logistics
- technology support for online services
- child care programs and services
- government owned or leased buildings
- essential government services
- any personnel necessary for online or distance learning or classes delivered via remote means

13. Recreation

Local government are permitted to determine whether parks and other public spaces, as well as low-risk recreational activities may be open.

If open, appropriate social distancing of at least six feet among individuals must be abided, acceptable face coverings must be worn by individuals who are over the age of two and able to medically tolerate such coverings, and frequent cleaning/disinfection measures must be in place for hard surfaces and objects frequently touched by multiple people (e.g., handrails, benches).

14. Other professional services with extensive restrictions

- Lawyers may continue to perform all work necessary for any service so long as it is performed remotely.

Any in-person work presence shall be limited to work only in support of essential businesses or services; however, even work in support of an essential business or service should be conducted as remotely as possible.

- Real estate services shall be conducted remotely for all transactions, including but not limited to title searches, appraisals, permitting, inspections, and the recordation, legal, financial and other services necessary to complete a transfer of real property; provided, however, that any services and parts therein may be conducted in-person only to the extent legally necessary and in accordance with appropriate social distancing and cleaning/disinfecting protocols; and nothing within this provision should be construed to allow brokerage and branch offices to remain open to the general public (i.e. not clients).